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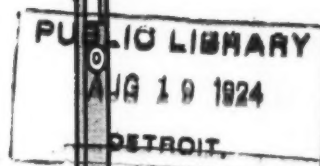
The AMERICAN RIFLEMAN

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AUGUST 15, 1924

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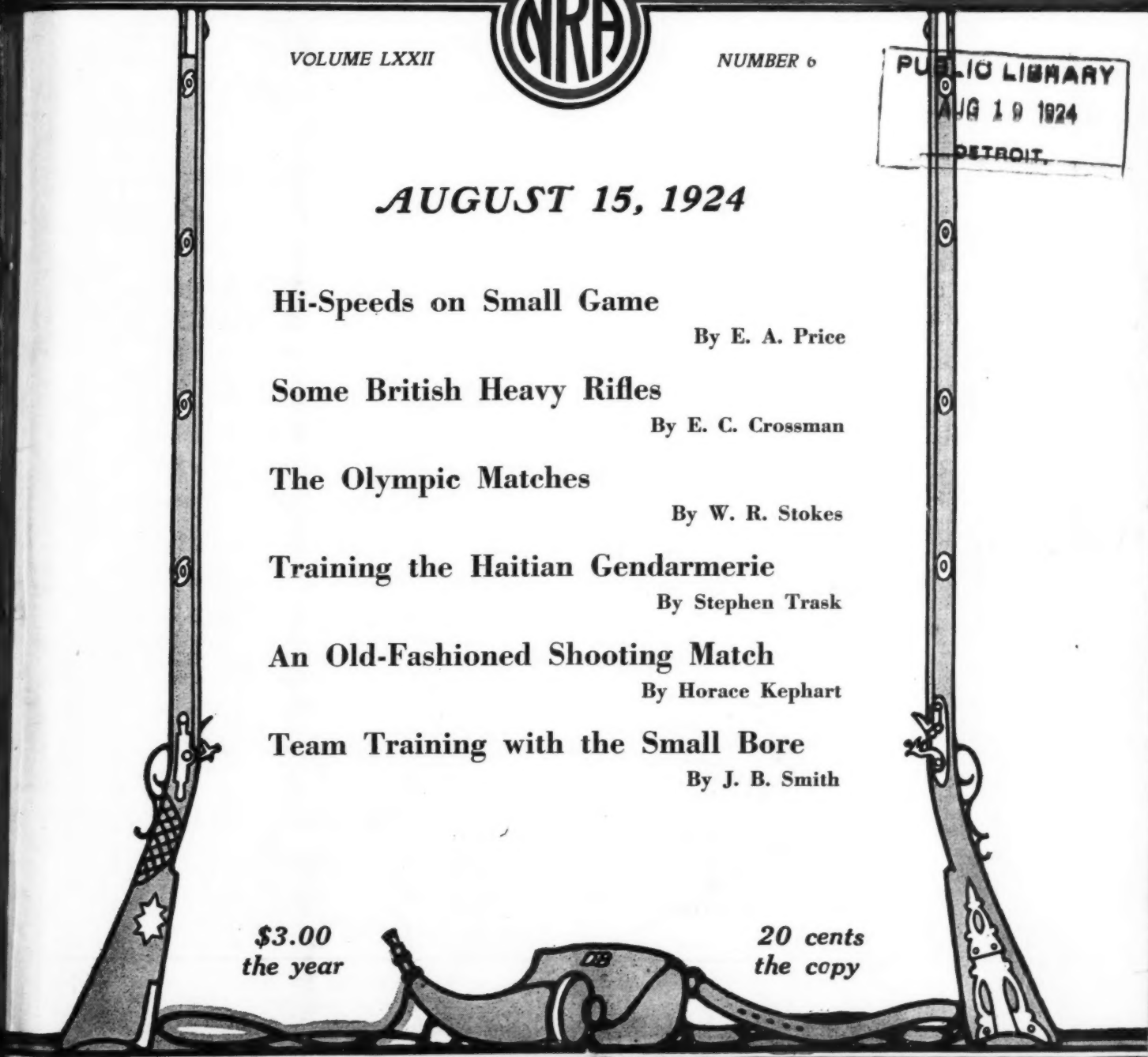
By Horace Kephart

Team Training with the Small Bore

By J. B. Smith

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WASHINGTON, D. C., AUGUST 15, 1924

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Civilian Teams Will Go to Camp Perry

By Kendrick Scofield

CIVILIAN TEAMS will be taken to Camp Perry this year at government expense. Authority for the expenditure of funds for this purpose was given the National Board for the Promotion of Rifle Practice by the Secretary of War on August 9.

Details affecting team personnel and eligibility have already been sent to the governors of the several States and Territories in the form of an official memorandum. The methods by which membership on the team will be determined, however, is largely left to the discretion of the State executive, and because of the short time which intervenes between the date on which team must report in order to attend the small arms firing school previous to participating in the competitions, it is doubtful whether the custom of picking the team by competition, as is the custom, will be practicable in many localities.

The full text of the memorandum which has been sent to the governors of the States, reads:

August 9, 1924.

MEMORANDUM TO THE GOVERNORS OF THE SEVERAL STATES AND THE COMMISSIONERS OF THE DISTRICT OF COLUMBIA

Subject: Attendance of Civilians at Small Arms Firing School and National Matches, Camp Perry, Ohio September 5 to October 2, 1924 inclusive.

Under date of August 9, 1924 the Secretary of War authorized the attendance of Civilians at the Small Arms Firing School and the National Matches at Camp Perry, Ohio September 5 to October 2, 1924 incl., at the expense of the Federal Government under the following conditions.

COMPOSITION OF TEAMS

The Governors of the several states and the Commissioners of the District of Columbia are authorized to designate thirteen able-bodied male citizens of the United States, residents of their respective states or the District of Columbia, as a team to attend the Small Arms Firing School and participate in the National Matches, Camp Perry, Ohio during the period September 5 to October 2, 1924 inclusive.

Each team will consist of 1 team captain, 10 shooting members and 2 alternates. Any number of additional men may constitute the team squad and subsequently be eligible to shoot in the National Team Match provided they meet all eligibility requirements, but only 13 men shall be entitled to participate at government expense as herein after provided.

REIMBURSEMENT EXPENSES

Reimbursement of travel expense and commutation of subsistence allowance shall be made only to such Civilians as have been regularly designated in competent orders issued by authority of the Governors of the respective states and the Commissioners of the District of Columbia.

Each of the thirteen civilian members of each team will be reimbursed for travel expenses enroute from his bona fide residence within the state he represents (the bona fide residence of each civilian must be stated in the order designating him as a team member) to Camp Perry, Ohio and return to said residence at the rate of five cents per mile each way. The allowance for return travel to be paid in advance of performance of travel.

Each civilian member of authorized teams while in attendance at Camp Perry, Ohio between September 5 and October 2, 1924 inclusive will

be paid commutation of subsistence at the rate of \$1.20 per day.

No shooting members or alternates of any Civilian Rifle Teams shall be entitled to reimbursement if he is less than 17 or more than 45 years of age nor will he be entitled to reimbursement unless he be able bodied and capable of bearing arms.

ELIGIBILITY

The ten shooting members and the two alternates shall be subject to the same elimination rules as are established in paragraph 16 Bulletin 7 War Department 1924 which reads as follows:

A team listed in class A after the national matches of 1923 or after the last national match in which such team competed shall have at least 50 per cent of its shooting members composed of men who have never before shot on any national match rifle team. A team listed in class B after the national matches 1923 or after the last national match in which such team competed shall have at least 30 per cent of its shooting members composed of men who have never before shot on any national match rifle team. A team listed in class C or unclassified after the national matches of 1923 or after the last national match in which such team competed shall be subject to the following elimination rule only, to which all teams except those representing the Reserve Officers' Training Corps, the citizens' military training camps and the Organized Reserves are also subject, in addition to the rules prescribed above.

No team may have as a shooting member or alternate any man who has been a shooting member of any team in three or more of the five national rifle team matches immediately preceding.

The restrictions as to age and physical fitness apply only to such shooting members and alternates as claim reimbursement. The only restrictions placed on team members who do not claim reimbursement of government funds are those set forth in the elimination rule. The team captain should be a man with previous National Match experience. If the team captain is also a shooting member then he must comply with the elimination rule.

F. H. PHILLIPS, JR.,
Executive Officer.

Although the time remaining for the selection of a team is short, the civilian contingent will be well represented by several teams who are well able to shoot in fast company. In many of the states, upon the assumption that in all likelihood the attendance of teams at federal expense would not be authorized, rifle clubs have been hard at work organizing and equipping teams at their own expense. Among such states Illinois and Pennsylvania were exceedingly active, and these teams, together with several others may be expected to give a good account of themselves.

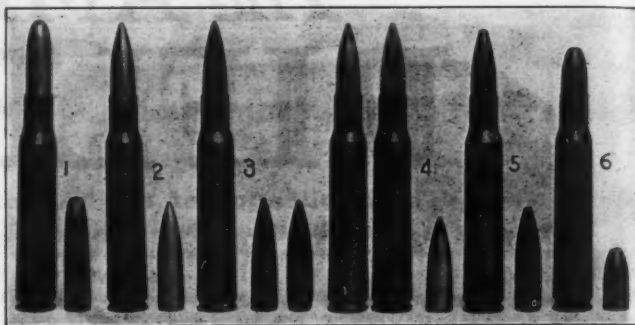
The problem of the civilian team at the national matches is a very important one, and one which is presenting new angles every year. One of the most vital points in connection with the selection of a civilian team is the necessity of making sure that every man who attends the matches at Camp Perry is 100 per cent interested in the shooting game. There can be no doubt but what the team personnel coming from States where the problem of picking the team has been gone into carefully, on a competitive basis, are 100 per cent interested, and this method should be followed whenever possible.

Hi-Speeds on Small Game

By E. A. Price

A BALANCED RATION

No. 1, 220-grain full patch; Western 220-grain soft-point Lubaloy bullet shown on right. No. 2, U. M. C. 180-grain Match. No. 3, Western 180-grain Lubaloy Match; note very sharp point; also a F. A. 170-grain boat-tail bullet for comparison. No. 4, U. M. C. 150-grain Bronze Point, velocity 3,000 f. s.; one cartridge has bullet sectioned to show construction. No. 5, Western 180-grain open-point Lubaloy, velocity 2,725 f. s. No. 6, U. M. C. 110-grain Hi-Speed, velocity 3,500 f. s.



WERE it not for the taint of aliteration I should call it "Hi-Speeds on Bow-Wows, Buzzards, Bunnies, Buckets, and Bees." That is the list of martyrs that fell in the name of science.

We wished to try all the latest .30-06 cartridges on moose and bear, but a walk through the pasture of our Arkansas plantation failed to reveal any of those animals. Not even a coyote to try the new gun on.

But living on the place are some forty families of negroes, and to make a rough estimate, we will allow a dozen worthless, mangy, cur dogs per family. Does that suggest anything?

The first volunteer was struck in the center of chest as he sat on his haunches, facing me, at a distance of twenty-five yards. The bullet was the Remington 110-gr. at 3,500 f. s. This dog, like the others to be mentioned, was of no particular make—just one of the "compound hounds" which come in medium sizes.

Due to the subject being seated at the time, the bullet should have come out through the spine just back of the withers. Yet the skin was not broken, save at the point of entry. The bullet fragments passed above the heart, pulverized the lungs, and smashed six or seven vertebrae.

I really had expected to see that 3,000 foot pounds energy make itself known by blowing a large hole through the dog's back. Yet I am not greatly surprised; I once had a soft point Savage .250-3000 fail to come out of a rooster.

Another dog was shot at fifteen yards (this was not an accuracy test) with the 110-grain Hi-Speed. It was standing almost broadside, the bullet entering close to diaphragm and coming out just behind opposite fore leg. Did it blow a large part of the chest wall away in coming out, as I once saw the .250 Savage do? No, most of its energy was expended before it got that far. One fragment got through, making a hole the size of a nickel.

Of course, the shock and destruction to tissue are tremendous, and for "varmint" shooting nothing could be finer. At longer ranges its penetration would be much better. That light, blunt bullet slows down very rapidly as the range increases, so when someone describes its action on a large animal at 300 to 400 yards, remember that he is no longer discussing ultra high speed phenomena.

Dog Number Three received a broadside above the heart in the form of a Remington 150-gr. bronze point at 3,000 f. s., at twenty

yards. The exit hole was five inches in diameter, and most of the heart, lungs and what-not were spread over the grass beyond. That looked more like it.

For the Western 180-grain open point, I had saved a well-nourished dog of good size to match the big bullet. It was his daily custom to course rabbits in our pasture before breakfast, and was as wild as a coyote.

His shrill yelping drew closer as I crouched among the thorn bushes, and when presently a rabbit bounded past me, I knew he would soon follow. Just before reaching me he must have caught my scent, for his note changed and he charged by, no longer engaged in the chase, but going places.

The 180-grain open point caught him about four inches back of the shoulder and midway between back and belly. The hole at exit was two inches across, with part of liver protruding. Heart was ruptured, lungs were badly mused up, and even part of the liver was torn away, showing a remarkably wide range of destruction for a bullet going straight through. Much energy was doubtless wasted on the brush beyond.

I saw another party shoot a dog diagonally through the body at a distance of eighty yards with the 150-grain full-patch service bullet. It ran for about 300 yards as though unhurt, crawled under the colored folks' church house, and died. I am told by one of the congregation that its presence was quite noticeable during services the following Sunday.

Now for the buzzard, which was contentedly tearing choice morsels from a putrid chicken under the mid-day sun, 100 yards away. A 110-grain bullet landed a trifle too low, but blew the lower half of its body clear off. At the crack of the rifle, (an observer says *before*), the big bird seemed to rise in the air a foot or two, and was slammed backward six or seven feet. No other cartridge made today can impart so much energy to so small and tender an object.

Another buzzard, shot squarely through the body with the service bullet, flew a couple hundred yards, and the holes were small.

While it is true that most any high power rifle will dismount a rabbit into its component parts yet some will do it more effectively than others. I poked a cotton-tail in the posterior aspect with a 110-grain bullet, and all that remained was the head. I saw a leg soar skyward and land about thirty yards away, and after I supposed all the pieces had returned to

earth a chunk of flesh hit the mud in front of me with a loud smack. This is the only cartridge which truly blows them "to atoms"; the others only reduce them to molecules.

Their performance on buckets of water I consider the most interesting of all. Lightweight paint buckets six and one-fourth inches in diameter by seven and one-fourth inches high, having a capacity of one gallon, were set up in front of a block of oak at twenty yards.

The 150-grain hard point service bullet gave the usual performance of ruptured bucket with large hole on the far side, and keyholed into the oak for a distance of three inches. The oak was touching the bucket, so the keyholing must have occurred while passing through the water.

The 150-grain bronze point Hi-Speed scattered the water much more violently and blew the bucket into two parts. The bullet struck the oak in a cluster of fragments which penetrated to a depth of one inch.

But the 110-grain bullet deserves the title of the world's most beautiful bucket buster. It positively reduced the water to mist. Some others will reduce it to a fine spray, but as an atomizer the 110-grain is in a class by itself. The bucket broke into four pieces which flew in opposite directions, one coming back toward the firing point. The bullet completely disintegrated in the water, and one fragment made a slight dent on the piece of tin which had represented the back. The oak showed not a mark! Three thousand foot pounds of energy absorbed by a gallon of water!

A second bucket was set up for the 110-grain bullet, and results were the same except that the tin parted directly in the back and let a few specks of bullet material through, which stuck lightly on the surface of the wood. The largest particle found was a bit of jacket about one-eighth inch square.

Lastly, we come to the incident of the bees. A swarm, about the size and shape of a football, hung from a small limb a few feet above the ground. A 110-grain Hi-Speed crashed into their exact center at ten paces. I never did like bees, and I hoped they would be exploded into as fine a mist as were the buckets of water. But their fluid content was not great enough to give the desired effect, and the bullet only bored a tunnel about the size of a baseball.

Exact measurements of the hole were not taken, but I saw it clearly, over my shoulder, as the scene faded rapidly into the perspective.

The Testing of a Skookum Gun

By Capt. Edward C. Crossman

Part I—Some British Heavy Rifles

THIS story may not appeal to you as being an interesting one, but I can at least guarantee that there's a kick in it.

As a rule the average man has the same keen personal interest in powerful rifles for heavy game, as he has in the airplane motor which crossed the continent in one jump, or the new straight-eight Packard. He may enjoy reading about them but they don't enter into his young life.

This yarn, however, is about a "big gun" which doesn't have to be taken to Africa to demonstrate just how good it is, which is lucky because most of us find trips to Africa to try out big guns, very inconvenient for a number of reasons, the first one being lack of money, and then the others not making much difference.

The appearance in THE AMERICAN RIFLEMAN of advertisements of heavier rifles than the Springfield, the Whelen .35 and .400, made by small gun-makers in order, indicates that there are quite a few chaps in this country, seeking the big Alaska bear, or moose, who like to hit their bear or moose so hard that he gets pushed right back on his tail-feathers.

While the Kodiak bear doesn't roam the Pennsylvania woods, it does hold forth in American territory, and from what a friend tells me, now and then gets in a stubborn mood and displays a regrettable ugly spirit about being killed the first shot or so. I saw one hide captured by a gentleman named Briggs, of Needles, Cal., which was once wrapped around a bear of such cantankerous disposition that he insisted on being fed most of a box of .35 Winchester cartridges. If the pizen disposition of that bear matched his size then it seems to me a fine idea for those seeking him to first practice climbing trees.

The judgment of most foreign hunters, who often get into lands and sorts of game entirely unknown to the American hunter, is that heavier rifles than those commonly affected by American hunters should be used. For instance that powerful rifle, the .280 Ross, was designed purely as a deer shooting rifle for Scotland, even though it did push a bullet of 145 grains about 3100 ft. per second, and an energy of 3100 lbs. roughly twice that of the .30-30. Neither British nor any other foreign sportsman has any time for the peanut type of cartridges of the .30-30 sort, even for deer and chamois shooting. The smallest cartridge used for this sort of game is the 6.5 mm. Mannlicher, one of the most popular of the European deer rifles.

The popularity of the .30-30 and its kindred cartridges can be traced largely to models of rifles available for it. For about \$15 one could get a well made and light carbine or other type of lever action rifle in the .30-30 class, from any small hardware or sporting goods store. The more powerful military cartridges such as the .30-40, and the .30-1906 were not available in cheap light rifles. Only one model of one American rifle would handle the .30-40, and this was heavy, ill-balanced, with protruding magazine just where you don't want any-

a lever action, light in weight, and not different from the old accepted type.

It is my firm conclusion, reviewing the many weary miles I have sweated over hunting for just one chance at big game, that the man who will let first cost of rifle, or the cost of the one or two boxes of ammunition, or the little extra rifle weight, turn his one chance into a heart-breaking disappointment, is not exactly a gentleman who has given the matter due, and unprejudiced consideration. And this is quite likely to happen with a type of

cartridge which has so often proved itself lacking in power and smash for the shots not quite correctly placed or made at considerable range.

I have recently been working out a powerful foreign rifle and cartridge which I believe would fill in a gap in our list of sporting arms, inasmuch as it offers sufficient metal to



The Wesley Richards .425 Mauser, up to a short time ago the most powerful magazine rifle built

thing sticking out, and cost much more than the other guns.

It is too bad that this flock of inadequate big game rifles was ever turned out for the American market. I have been living for a year in the backwoods, where the deer come down into my clearing, and where the folks roundabout have been shooting big game since the first gold miners came in about 1851, and I have listened to the low-down on the work of their favorite sort of rifle, the .30-30. Out of their own mouths do they condemn their own selection, because tale after tale, told without being conscious of the point I was getting from it, goes into how the buck got away after being hit because they didn't have a dog along to trail him, or he went straight down the canyon and it was getting too late to get down after him.

They continue to use such rifles because such little unfortunate incidents seem normal to them, they have never used more positive rifles, and often don't like them when they do because they cost more money, weigh more, kick more, and use more costly ammunition. I notice, however, that when one of them goes out into the hills for a while with such an arm as a Krag carbine, it stays with him, and the old .25-35 goes into the discard.

The appearance of the new Remington Hi-Speed line gives to the old 2,000 ft. .30-30 class a new lease on life, but even that change does not put them into the Springfield class, particularly as the Springfield itself moves up into 3500 ft. per second. One of the most popular of the new cartridges down here in the woods is the Savage .300, giving Springfield service cartridge ballistics, withal still

ramble right into the boiler room of the heaviest American game, and the velocity sufficient to ensure ample smash and shock. Too many heavy bullets act like the armor piercing shells which Sampson's fleet took to Santiago and used against Cervera when the dash for escape came. A gentleman in position to know told me that in those days of great preparedness and warlike efficiency, the American ships loaded into their magazines from the Brooklyn Navy Yard a supply of our new armor piercing shell, but so great was the hurry that there was no time to load in the bursting charges in said shells.

So when they came to be used against the Spanish ships, what few shells of the main battery which hit the ships of Cervera, slipped through them like a needle through cheese. All of which, in addition to the rotten American gunnery, which would court-martial the commander of any modern American fighting ship, explains why the Spanish ships were destroyed chiefly by the light guns of the American secondary batteries. Very few shots of the big main battery guns hit the Spanish ships at all.

The big rifle to which I refer is the 11.2 mm. German Mauser, firing a bullet of 330 grains with the velocity of 2500 ft. per second in 28 inch barrel, and with the energy of 4600 ft. lbs., or double that of the service 1906 cartridge.

It is the first of the powerful class of rifles for which I feel any enthusiasm as to owning, the others being too weighty in rifle and too heavy in recoil and firing too much bullet to be of any other than impersonal interest to the average American hunter.

Some years ago Powhattan Robinson, of the New York Sporting Goods Co., agents for Westly Richards, sent out to me for trial two powerful British magazine rifles, the .425, and the .318, both Mauser actions. They were accompanied by several hundred rounds of cartridges and I made pretty exhaustive test of both of them, although I had to take their velocity figures on faith, which in the case of the British makers, is not always a very advisable proof of one's confidence in gunmakers.

The .425 interested me because the greatest of living hunters, F. C. Selous, had used one the year or two before on an African trip, and expressed himself as being entirely pleased with it. The fine old gentleman—second only to Sir Samuel Baker in his game shooting records, and the inspiration for Rider Haggard's Allen Quatermain—wrote to me in 1914:

"My real hunting days in Africa were long ago before the days of Cordite rifles. It is true that I have made a few shooting trips recently to Africa—to British East Africa in 1910, to the Central Sudan in 1911, and again to British East Africa in 1912, but nowadays one is so restricted in the matter of shooting heavy game that it is impossible to get any great amount of experience with a heavy rifle. On my last—1912 I took a Wesley Richards .425 rifle and a .275 by Holland & Holland. This latter rifle I used almost exclusively as under my license I was only entitled to shoot two buffalo bulls, one rhinoceros, and an elephant bull. We did not see any male elephants but I shot the one rhinoceros and the two buffalo bulls with my .425 W. R. I killed the one buffalo and the rhino with one shot each, and the second buffalo bull I wounded.

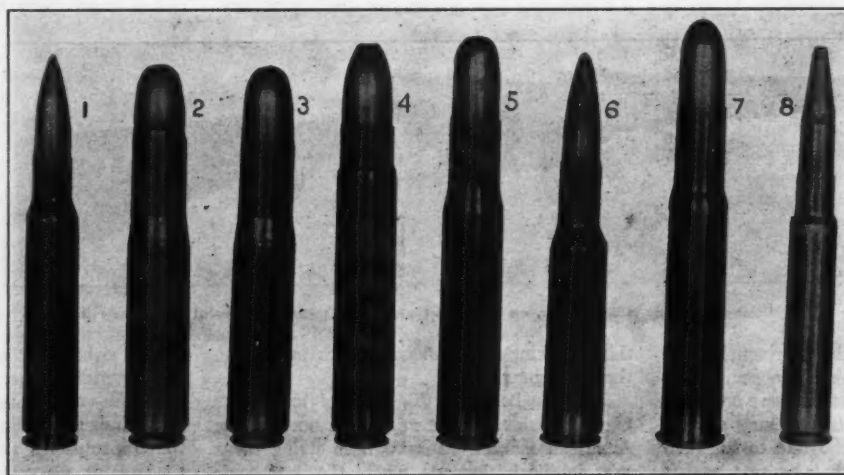
"It charged in thick brush and knocked my gun carrier over, but at the same moment—I was within three yards of him—I got a shot into it which injured its neck bone and brought it to its knees and I then killed it with another shot.

"Judging from this small experience my .425 W. R. rifle seemed to me to shoot hard and well. I am hoping to go to the Sudan again next winter and I shall take with me a .375 by Holland & Holland, and a new .505 bore magazine—one cartridge in barrel and 3 in magazine—in case I come across elephants or buffaloes.

"I certainly think that in the case of charging lion or buffalo a heavy double barreled rifle would be better than a magazine. However, these heavy double barreled rifles by a good English maker are so expensive that I have never been able to buy one, and in future, as in the past, I shall only use magazine rifles.

"But I am no authority on modern rifles for I have not had sufficient experience with them. I have shot moose, caribou, elk, and muledeer with an old single .303 (British) in 1897, '98 and 1900, and moose and caribou in the Yukon in 1904 and 1906 with a Holland .375. I do not think the very heavy rifles are necessary for American game unless it may be for the big Alaskan bears."

All of which reminds me that the man who likes hunting stories would find the new book "The Life of Selous" obtainable from the London Field, one of the most attractive of books of this type. As most sportsmen know the grand old man of the early African hunters went to East Africa with the British contingents at the outbreak of war, and was shot through the head by a German sniper in German East Africa.



1. Springfield. 2 and 3. .425 Wesley Richards. 4. 11.2 mm. 5. .404 Jeffrey. 6. .333 Jeffrey. 7. .465 British Cordite. 8. .318 Wesley Richards. These are representative British heavy magazine rifle cartridges

The other of the two rifles, the .318, had nearly as impressive an advocate in the person of Captain Sutherland, a professional elephant hunter who shot more than 600 elephant, and whose book "My Life as an Elephant Hunter," is fascinating. Sutherland pronounced the .318 as the best rifle he had ever used for general all-round. He used it on elephant in the open country shooting at considerable range. I note that he reiterates his opinion since the war and has taken another such rifle for his hunting. The ballistics claimed for this rifle are very close to the 11.2 mm. which I have been trying out in that both develop 2500 ft. per second, the .318 having bullet of 250 grains, the larger bore 11.2 (.439 inch actual bullet measurement) firing a bullet of 330 grains. The sectional density of the 11.2 mm. is of course lower in spite of the weight.

The .318 with its 250 grain bullet at 2500 ft. secs. (if it gets up that fast) has an energy of 3450 ft. lbs., and with its high sectional density retains its velocity to a considerably greater extent than other rifles of the .30 class with lighter bullets. Evidently it is quite an efficient cartridge, but tests made by American companies do not get the claimed velocity of 2500 ft. even with 28 inch barrels.

Leslie Taylor, the head of the Westly Rich-

ard Co., and one of the highest technical authorities in England has a pet hobby that military cartridges are made to wound and not to kill and ergo, regardless of change in bullet type, they work thusly on big game, which is what a logician would term a non sequitur—it does not follow. Regardless of the fact that practically every one of the military cartridges has proved itself a good game killer, from the 6.5 mm. Mannlicher and Mauser, through the 7 mm. Mauser or 2.75 as Holland & Holland call it, past the 6.65 and 8 mm., and the .303 British, and the American .30-40 and .30-1906—Mr. Taylor stubbornly clings to his allegation, proving that something more than mere facts are necessary to get a Britisher to change his mind.

The other cartridge, the .425, was then the largest cartridge fired in a magazine rifle. It is a rimless case—like the 11.2 mm. having the body larger than the head of the cartridge, which is of standard Springfield or 8 mm. diameter to fit the Mauser bolt head. The 11.2 mm. for instance, measured .537 inch forward of the cannelure or extractor groove, and .468 just back of it, that portion of the case which rests against the bolt face. The powder chamber is thus .069 inch or roughly one-sixteenth inch larger in diameter than the head of the case.

It is worth noting that the later tremendous magazine rifle cartridge, the .505 Gibbs, referred to by Selous, is not thus stepped down to fit the normal Mauser bolt, but the head is left the size of the rear end of the powder chamber or .635, as compared with about .470 for the Springfield. This leaves nothing much of the bolt head flanges of the Mauser bolt but a suspicion on one side and an extractor on the other.

The bullet of the .425 proved to weigh 411 grains in the expanding point type, 405 grains in the solid, the velocity being about 2300 ft. with 26 inch barrel, energy being thus 4800 in round numbers.

The two rifles proved to be straight Mauser rifles, plus a take-down arrangement in which the barrel turns out of the receiver, the forestock being cut at this junction, of course. It didn't look very pleasing from a mechanical standpoint, particularly with a receiver or bolt head sight. The .425 had an unpleasant protrusion worse than a Model 1895 Winchester and reminding one very much, from an artistic standpoint, of Old Sukey waiting to be milked.

This said protuberance was necessary to take in five of these large and bot-bellied cartridges. It had on its belly-bottom, if I may be pardoned the rough and crass expression, a catch which unlocked the floor plate and per-

mitted unloading the magazine through the cellar. Said catch, like that on the Sauer-Mauser and similar rifles, was nicely adapted to being turned if the rifle were carried across the front of one's saddle for a hasty shot, as most people outside of mouthy arm-chair boobs know is quite likely if one hunts much on horse-back. As I had my Sauer-Mauser perform precisely in this fashion and let my magazine and ammunition depart hence, I should prefer either the military type of fastening, or else the much preferable catch pivoted in the forward curve of the trigger guard, out of harm's way.

This magazine juggling is mostly a talking point, but in a country like Africa where pleasant surprises are likely to turn up and the rifle is found filled to the brim with soft nosed bullets where hard nosed are needed, or vice versa, the speedy magazine jettison business might come in very handy.

Like most British rifles both of these Westley Richards Mausers had a row of rear sights that licked the longest row of keys you ever saw on a cornet and reminded one of a militia company on parade—except that they apparently knew more about the meaning of "right dress" than the militia.

This everlasting row of open sights, one for about every 25 yards from muzzle to say 1200 yards, always tickle me when found on rifles for which the makers claim a trajectory that is flatter than the head of the fellow who'd pay \$150 for one of these guns.

In view of the fact that these rifles consisted, like many other rifles, of an action, a barrel, a stock, and a couple of dozen rear sights, were stocked with very plain walnut, plainly finished and had nothing luxurious about them but the price, I was unable to find about \$75 of the money asked for them. This remark also goes for current British sporting rifle production by the small and much touted gunmakers.

The action was straight Mauser, and it didn't work as nicely as a lot of Mausers from Germany at about 25% of the British price. There was not a line of checking on bolt handle, trigger or safety-lock, where it is a pious idea to put a little against the time when you have to operate the gun in a hurry.

The stockings was pretty poor as to line, and fair in execution, grips entirely too long, forestocks poor, in fact nothing to back up the fact that they were produced by the gunmakers in extraordinary to the Emperor of India and way-stations. Maybe they held out on the ordinary public, particularly the American variety.

The .318 rifle weighed 8½ lbs. with 26 inch barrel, claimed velocity with this length 2470 ft. It had a poor grip, poor cheek-piece, butt plate not checked but left smooth, cleaning rod in said butt plate that I never did manage to get out of the gun, and excessive comb drop.

Rifling was modified Metford, seven groove, measuring .3245, bullets measured .328.

The action of this rifle had been cut away one-fourth inch to take the long-pointed, hollow-cap bullet ammunition, leaving very

little of the metal in the locking shoulders. This very thing brought a published letter of protest from the Mauser works before the war, pointing out that this action was designed with a certain amount of metal, and that they did not approve of the cutting away of the vital parts to take in cartridges too long for the action.

The trigger pull on both rifles was bad, and no Springfield rifle owner would have put up for one day's shoot with such a gun. Great is the big name in England.

The .318 cartridge is rimless, the case .465-inch at the base, or practically Springfield diameter, and that lot was loaded with 45 grains of Axite, a strip powder similar to Cordite in its fondness for steel, but much touted before the war as the short way to salvation.

The bullets come in three types. The first, a round-pointed copper cap, red-headed naturally from the copper, has a cavity ¼-inch deep, with the core under the cap concaved at the forward end. The nickel-capped is



Shooting the .425 Mauser

semi-pointed and of good ballistic shape, having a cavity 7/32-inch deep and ⅛-inch wide at the widest portion, this bullet is 3/16-inch longer than the copper cap. The third was the full-jacket with special heavy jacket at the nose to let it through railroad iron, tanks, elephants, the heads of hostile Britishers, etc. For some reason all of these bullets were coated with wax, which promptly melted in the sun, and picked up any little dirt that was handy.

None of the British ammunition is in the same street with Springfield stuff, or with good German-made stuff, the brass doubtful, and usually soft and the bullet stuck in with a row of "stabs" in the neck and doubtful as to waterproof condition.

The .425 contained 84 strips of Moddite, a form of Cordite, but also touted as much superior. Some of the cases contained a weight of 65 grains of Cordite. A clip of this ammunition weighs just eight and one-half ounces so the hunter ought not to carry more than a bandoleer at any one time.

The recoil of the .318 figures in theory, using a standard British formula, fourteen foot seconds velocity, and 26 foot pounds energy, as contrasted with sixteen foot pounds for a nine-pound Springfield under the same system

of figuring, or 17.2 foot pounds with eight and one-half pounds weight.

This particular .318 developed very good accuracy, making several five-inch groups at 200 yards, but I understand that others have not shown as good results. The recoil was not at all noticeable to the person used to the Springfield, although it would have worried the man who buys the .250-3000 to avoid getting kicked by such powerful cartridges as the .30-1906.

No doubt the .318 is a good rifle, but its red hot powder, its poor ammunition and high price thereof, not to mention the cost of the rifle are all handicaps which do not offer any inducement to the American sportsman who can get a good rifle to fire the various modifications available in the 1906 cartridge.

The .425 was the one which aroused my interest, for one reason because it was the first time I had plenty of ammunition for an ultra-powerful rifle according to our standards.

It made quite an impression on me, in fact, it took about a week for it to wear off in spite of the rifle being fitted with a Silver recoil pad. To this day I don't know just how accurate this rifle was. Neither would you if you'd had your fool head about snapped off firing the cannon from muzzle and elbow rest just once and had the rest rock back and forth until you commenced to get seaisick.

After this I took mine out shooting standing up or sitting. I tried one shot from the squatting position, and sat down for the next shot without wasting any time, in fact, it was practically simultaneous.

That fool gun weighed just nine pounds and three ounces, or the average weight of the average Springfield service rifle with sling. As I have said before, I don't know what's the matter with those Britishers, they are not human or something. They want their rifles and shotguns so light as to give you the idea that their average weight is about 110 pounds, and their strength about Z-17, if Dempsey grades as A-1, and then to disprove this they take a wallop that would just naturally loosen the fillings in your back teeth—if any—fillings, I mean, not teeth. The only explanation I can evolve is that when a fellow's scared green he doesn't mind a little kicking, it sort of takes one's mind off one's troubles, which would explain the heavy rifles, if not the heavy recoil light shotguns. The Britisher thinks a gun is a heavy pigeon gun, about right for 1½-ounce shot loads when it approaches anywhere near the 7¼- to 8-pound mark.

If this .425 had weighed two pounds more or 11 lbs. 3 oz., the additional weight would have hardly restrained its exuberance.

The recoil velocity of the rifle was 19½ ft. secs., and the recoil energy 85 ft. lbs., or about three and a half times that of the service rifle of this weight.

Taking it off paper and putting it to the test of trial developed a kick so violently nasty that it hurt one's neck. I have shot heavy powerful rifles of around the same energy, but the effect, produced by more weight at lower recoil speed was more like somebody giving you (Continued on Page 16)

Title illustration shows a view at Chalons where the service events were fired. The range is a newly built one and is operated quite generally along American lines.

WHEN the International Free Rifle Match closed at Rheims on June 16, with a great victory for the riflemen of the United States, the work of our shooting representatives was far from ended. Immediately following the free rifle match, our riflemen took up practice for the approaching Olympic events, and began firing in the French N. R. A. program.

On June 18 the pistol team swung into action in the International Union free pistol event. Handicapped by light-weight guns and with no set triggers, they faced a hopeless proposition in going against the best European hand-gun experts, with their marvelously adapted hair-trigger pistols. Yet, despite this, our team landed fourth place on the best score ever made by an American pistol team in European competition. The Swiss took the match with a new world's record score. The French gave them a battle all the way and the Danes were a strong third. Doctor Schnyder of Switzerland captured the individual title with the high score of 531. Aranz of Argentina really made 533, but he had the misfortune to put a ten on the wrong target, thereby dropping into seventh place. Following is a resume of the results of the match:

STANDING OF THE COMPETING NATIONS			
1. Switzerland	2572	8. Italy	2418
2. France	2561	9. Portugal	2412
3. Denmark	2540	10. Finland	2327
4. United States	2503	11. Czecho-Slov.	2302
5. Spain	2424	12. Holland	2109
6. Belgium	2421	13. Poland	1576
7. Argentina	2420		

Monaco, Roumania, Greece, scores incomplete.

INDIVIDUAL STANDING	
1. Dr. Schnyder, Switzerland	531
2. Van Asbroeck, Belgium	527
3. Lehrmann, Denmark	527
4. Hanni, Switzerland	526
5. Petit, France	525
6. Martins, Spain	524
7. Aranz, Argentina	523
8. De Castelbajac, France	517
9. Lane, United States	516
10. Keller-Dorian, France	515

SCORES OF THE UNITED STATES TEAM

Bailey	488
Frazer	496
Whaling	503
Lane	516
Calkins	500

Total 2503

Never before, in any international match have the scores run as high as at Rheims. Our team was a god one—we would have a difficult time getting a better—but we can not hope to play this free pistol game successfully until our pistol shots, as well as our riflemen, are properly equipped.

The Olympic Matches



Illustration on opposite page shows the running deer target at the Versailles range. The entire running deer schedule was fired on this one target.

to the Americans to lose the match after Dinwiddie's great shooting, but all hats were off to the Frenchman for his superb accomplishment.

In this, as in all Olympic events, points were awarded on a basis of 10 for first, 5 for second, 4 for third, 3 for fourth, 2 for fifth, and 1 for

sixth place. Following is a list of the place-winners in the small bore event.

Following is a list of the place-winners in the small bore event.

1. De Lisle, France	398
2. Dinwiddie, United States	396
3. Hartman, Switzerland	394
4. Theslof, Finland	393
5. Knutson, Sweden	392
6. Reich, Switzerland	392

All of the above scores better the records of 391 made by Larry Nuesslein in 1920. The high scores of the match were due to ideal conditions and the presence of the fastest company of small bore shooters ever assembled. Of the other three United States entries, W. Stokes turned in 390, and Grier and Boles 389 each.

Just prior to the Olympic small bore event the International Union staged the first annual woman's championship match, consisting in 20 shots, offhand, at 50 meters. Madame Catherineau of France was the winner with the very good score of 193. The United States was not represented in the match.

On the day following the Olympic small bore events, Rheims was deserted, most of the shooters moving out to Chalons, some thirty miles distant, for the Olympic long-range matches. The American riflemen remained at Rheims and motored to Chalons each morning for the firing there. The 24th and 25th were given over to practice and the matches were fired on the 26th and 27th.

The range at Chalons is a newly-built one, modeled and operated along familiar American lines. It is well located and attractively laid out.

During the two days of preliminary firing our shooters were able to run up enough good scores to make them confident of the match result. The only real difficulty encountered lay in a heavy mirage, which was bothersome during the middle of the day. The team selected to fire in the match was made up of Hinds, Coulter, Crockett, Fisher, and W. Stokes, with Osburn and Fenton as alternates.

The 400-meter stage of the match was begun early on the morning of the 26th. Twenty teams were entered for the match,

The International individual military rifle match was fired on the 19th. All competitors were required to use the French Lebel rifle, which practically disqualified the American entrants. Nevertheless Commander Cy Osburn took third place and several other Americans placed within the first fifteen.

On the 20th Lieutenant Hinds, of the American team, who had been accidentally shot in the foot some days previously, celebrated his return to the firing line by making a ten-shot possible, in the prone position, at 300 meters, firing in a re-entry match. This was the first 300-meter possible ever recorded in Europe.

The program of the French N. R. A. was closed on the 22nd by the firing of the so-called Grand Match of Honor, in the presence of the French Minister of War. The firing consisted of ten shots rapid fire at 200 meters, with the Lebel rifle. The Americans scored unexpectedly when Walter Stokes took second place in the event.

On the 22nd the International Small Bore Re-entry Match closed with young Dinwiddie of the American team winning of 87 four-shot possibles. Grier took second place for the United States with 65 possibles.

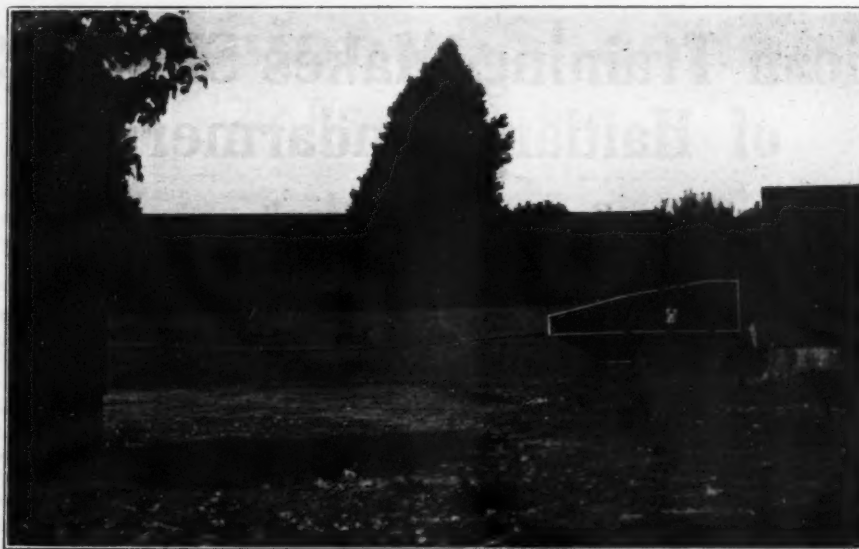
The Olympic program opened on June 23rd with the firing of the small bore event at Rheims. Each competing nation was permitted four entries, and the match was to be only for individual honors. The course of fire consisted of forty shots, offhand, on the International 50-meter target, the ten ring of which is 1.97 inches in diameter. When time was called for the match to begin, no less than twenty nations were represented on the firing line. Several high ten-shot scores were made in the first relay, and the fast pace thus established was kept up throughout the match. The hopes of our shooters were pinned on the youthful Dinwiddie, who had been doing remarkable shooting in the preceding re-entry event. He responded perfectly by turning in the record-breaking total of 396 (98-100-99-99). This effort seemed certain of victory until De Lisle of France astounded everyone by running up the marvelous total of 398 (99-100-100-99). It was a bitter disappointment

but of these England and Argentina withdrew, leaving eighteen actually on the firing line. Weather conditions were nearly ideal. A warm sun, a clear sky, and a mild 5- to 8-mile breeze from three o'clock, combined to produce the proper setting for good scores. Under these conditions Hinds led off for the United States with a possible. Coulter followed with 49 and Stokes turned in a like total. Crockett struck some difficulties with elevation and dropped to a 47, but Fisher came back with a possible to offset it. France, meanwhile, was also turning in high scores, and at the conclusion of the 400-meter shooting her total was but two points behind that of the Americans. Three points behind France were Haiti, Finland, and Switzerland, all tied for third position.

In the afternoon the 600-meter stage of the match was fired. On the first relay a tricky fishtail wind brought scores down all along the line. Hinds, the first American, was especially unfortunate; he was caught out for eight fours and a three. His total of 40 was topped three points by the first Frenchman, thus enabling France to assume a one-point lead. From this on, however, the American scores began running stronger, and France soon dropped again into second place. Coulter produced a 44, and Stokes, catching a lull and shooting rapidly, turned in a 49. Crockett shot a 45 and Fisher finished with a 47. At the end the Americans were high at the range by five points over Haiti, which came up strongly and overhauled France for second position. The American lead for both ranges was ten points.

The final stage of the match was fired at 800 meters on the morning of the 27th. The weather was clear, and a blistering sun produced a heavy mirage which proved to be useful to the Americans in doping the prevailing fishtail breeze. Stokes led off with a 40; Coulter followed with a 39; then Hinds put up a 41. This steady average was not being held by any other team, and the United States rapidly piled up points on France and Haiti. Crockett turned in a 41 and Fisher a strong 45, to continue swelling the lead, until the final American margin at 800 meters was eighteen points on France, which stood second. In the total score for all ranges the United States stood thirty points ahead of France and Haiti, which were in a tie for second place.

The fine work of the United States team at 800 meters was due in no small part to the excellent work of Commander Osburn in doping the wind for our shooters. It was in



this respect that the American advantage appeared most distinctly.

All of our men used their heavy-barreled free rifles, and all of them used the aperture front sight, somewhat of a departure in long-range shooting.

Following is a tabulation of the results of the match:

Standing of the Teams	400	600	800	Total
1. United States	245	225	206	676
2. France	243	215	188	646
3. Haiti	240	220	186	646
4. Switzerland	240	210	183	633
5. Finland	240	208	181	629
6. Denmark	234	215	176	625
7. Sweden	239	211	173	623
8. Norway	230	204	161	595
9. South Africa	226	196	165	587
10. Italy	224	195	157	576
11. Belgium	228	186	147	561
12. Greece	217	169	140	526
13. Roumania	206	166	153	525
14. Czecho-Slovakia	203	172	121	501
15. Poland	204	138	129	471
16. Holland	190	146	120	456
17. Portugal	204	135	104	443
18. Hungary	(Score Incomplete)			
United States Team	400	600	800	Total
Hinds	50	40	41	131
Fisher	50	47	45	142
Crockett	47	45	41	133
Coulter	49	44	39	132
Stokes, W.	49	49	40	138
Team Total	245	225	206	676

The tie between France and Haiti was shot off at 600 meters, in accordance with Olympic rules, and the French took the place. But the accomplishment of the Haitians was scarcely dimmed by this fact; it is a truly remarkable thing that they were able to do so phenomenally well, less than two years after they had been introduced to the rifle game. Their work adds a new luster to the already great coaching records of their instructors McDougal and Smith of the U. S. Marine Corps.

It is more than interesting to note that the first three teams all fired Springfield rifles, and used Remington Palma ammunition.

On the afternoon of the 27th following the team match, the Olympic individual long-

range match was fired. It called for three sighters and twenty shots for record, at 600 meters. Each nation was allowed only four entries. Fenton, Fisher, Osburn, and W. Stokes were named to represent the United States.

During the greater part of the afternoon the shooters were troubled by a breeze of variable strength and direction. But even so, Fisher and Osburn each ran up a total of 95, which tied them for first place. In a ten-shot shoot-off, the hard-

hitting Marine won with a 48 against Osburn's 45. Stokes took fourth place with a 92. Thus the United States carried off eighteen points in the event. Up to this time the United States and France were tied on point total with fifteen points each. But now our shooters forged well to the front with 33 points against 15½ for the French.

The point winners in the individual match were as follows:

1. Fisher, United States	95
2. Osburn, United States	95
3. Larsen, Denmark	93
4. Stokes, W., United States	92
5. Augustin, Haiti	91
6. Courquin, France	90
6. Valboerge, Haiti	90

There remained now no rifle events at Rheims or Chalons, so on the 28th the American rifle shooters packed up their equipment and departed for Paris and Versailles, where the running deer matches were to be fired. The members of the squad who were designated to take part in this shooting arrived at the Versailles range on the afternoon of the 28th and at that time they did their only practice firing. They found at Versailles an excellently appointed little range, just outside the grounds of the erstwhile Royal Palace of the emperors of France. There was but one running deer for all the competitors to shoot at, but that one ran so frequently and so fast that all the match firing occurred on schedule, without the slightest difficulty. The deer ran on an inclined track, first down hill, then up, at a speed which enabled him to cover 20 meters in four seconds. The shooter fired from a cement shooting booth 100 meters distant. It was decidedly a "specialist" proposition, one requiring distinct equipment and training.

The first event was the individual single shot match. Our shooters had little expectation of winning, in view of their lack of training and the practiced skill of many of the Europeans. Yet the first event was taken by an American, Major Boles, with a margin of one point separating him from three European competitors.

(Continued on Page 17)

American Training Makes Skilled Shots of Haitian Gendarmerie

By Stephen Trask

TYING with France for second honors in the Olympic Military Rifle Team Match, the Haitian rifle team has given to the world an unanswerable argument in favor of American training methods. Less than two years ago, these men were part of what were—on active duty in pursuit of the Caco bandits, who still infest the Haitian hills—little better than a uniformed mob, regarding rifles as bayonet handles and shooting them—when forced to pull the trigger—from the hip with utter disregard of accuracy. Today those men return to Haiti with the knowledge that they proved better marksmen in the big team event than the Swiss, the Finns, the Danes, the Swedes, the Norwegians, the South Africans, the Italians, the Belgians, the Greeks, the Roumanians, the Czechoslovaks, the Poles, the Hollanders, and the Portuguese. And the reason for this undoubtedly lies in the fact that they were trained by two finished riflemen under the accepted training courses in vogue in our Regular establishment, supplemented by less than two months' practice at the Olympic distances.

Had an attempt been made to select a group of men with whom to experiment to the end of proving the efficacy of American training methods, no more logical selection could have been made than a group of men from the Haitian Gendarmerie. Better to understand the elements which entered into producing a Haitian team which would creditably acquit itself in the fastest of competitions, to appreciate the magnitude of the task and realize its significance in relation to the training course employed, many circumstances which long ago foreran the appearance of the Haitian Gendarmerie on the Olympic firing line must be considered.

Since the days of Dessalines and Toussaint L'Overture, the Haitian patriots, there have roamed the hills of that Caribbean island, outlaw bands under the leadership of Caco chiefs. As time has passed, these revolutionist bands have degenerated into banditti, and today, instead of Cacos, they are known as bandits.

To oppose the bandits in their frequent pillage, and, as well to furnish the personnel of the police forces of the various Haitian towns, there was organized soon after the American occupation of the island the Gendarmerie, officered largely by Marines, and enlisted entirely from the island blacks, natives of limited childlike intelligence who eagerly signed up with the police not so much through a love of law and order as through the lure of ten dollars in gold and subsistence paid regularly each month, which means little short of affluence under Haitian standards.

Although the Haitian Gendarmerie, as might have been expected when officered by Marines,

Marine Corps teams of the past are all too well known to demand comment. Also to expect either of these men to command a field force ignorant of the use of the rifles they carried would be to expect the impossible. Whereupon "Colonel Mock" as he has been known on many ranges, determined that if the Gendarmerie ever again took the field, the bandits would have to reckon with men who knew how to shoot. This was two years ago.

The first step toward making the 2,500 gendarmes into riflemen was to make a rifle range part of the equipment of every post with the same relative importance as the cook shack or barracks. With the country divided into four

main departments, and each department into districts for policing purposes, there being at least one company assigned to each district, it was not long before the island was pretty thoroughly covered with rifle ranges, permitting shooting at 200 yards.

On these ranges, under the supervision of white officers, the black gendarmerie were put through the Army Special Course B, on the A target, slow fire standing, kneeling and prone, and rapid fire prone and standing. As a result of this approximately forty per cent of the enlisted personnel qualified as marksmen or better.

With this showing, a system of divisional competitions was inaugurated, and from these matches divisional teams of ten men each were picked and sent to Port au Prince where a National Team Match and a National Individual Match, called the President's Match, were held for the first time.

The success attending Colonel McDougal's first year of effort bore fruit the following season in a qualification list which included seventy per cent of the Haitian Gendarmerie, and in this year, the third target season in the island, it was determined to pick a team and send it to France for participation in the Olympic matches.

The idea met with instant enthusiasm among the black riflemen, and a slogan was adopted for the team (Continued on Page 16)



The Haitian International Olympic Rifle Team. Seated in the front row are Maj. Gen. D. C. McDougal, Chief of the Gendarmerie, and Maj. H. L. Smith, who organized and trained the team.

were from the first armed with Springfield rifles, no effort whatever was made to train these men in marksmanship, for a considerable time—this upon the assumption that to do so might later react against the peace of the Black Republic when the United States should have withdrawn its occupation. So the Gendarmerie continued to go into the hills in pursuit of the bandits, taking along rifles which to them were no better than bayonet handles, and blissfully ignorant of purposes for which rifle sights were provided.

This state of affairs continued until Colonel D. C. McDougal, U. S. M. C., was placed in command of the Gendarmerie and took to the island with him Major Harry L. Smith. Neither of these men need any introduction to shooters. Their achievements with winning

An Old-Fashioned Shooting Match

By Horace Kephart

Part II

ON the way to Bailey's Cove, Carman saw for himself why long range rifle shooting could not be a popular pastime in the mountains. There was no level land for a range.

Once they came out on a bare high knob from which they could see out over the forest for a great distance. Far as the eye could reach there was nothing but a labyrinth of mountains, all clad in forest green, save where a settler's little clearing, here and there, showed like a slight scar on the mountainside. These infrequent fields sloped at angles of thirty to forty-five degrees.

When they descended to creek valleys, which were sunk like ravines, they found there the only level land in the country. It was in narrow strips along crooked watercourses, and every bit of it was in cultivation.

It took the horses four hours to make the twelve miles to the Cove. Jim had beaten them to it afoot. He had a mountaineer's legs and lungs. Uphill was almost the same as level going for him.

Some forty men were already assembled in a worn-out strip of old-field behind Bailey's barn. Some were "blackening their boards," for targets, by charring split shingles over a fire. After the surface of a shingle was blackened in this manner, a cross was scored on it with a knife. The intersection of the cross was the center which the contestant would try to drill with a bullet, at sixty yards.

Of course, the cross was invisible at that distance. So a bit of white paper was tacked on the board with a hole cut in it close to the lower edge, and this hole was centered over the cross.

"Every man has his own way of fixing his paper," explained Long John to his guest. "I'll show you mine."

The old man blackened his shingle. He took from his pocket a piece of white note paper about five inches square. This he trimmed with his knife to the shape shown in the diagram here given. The diamond-shaped hole above the apex of the "swallow-fork" on the bottom had one-inch sides.

"Now, then," said John, "as I done told you, my rifle shoots one inch high at sixty yards, on the average, owin' to it bein' pupposely sighted for center at eighty yards, for huntin'. That makes it shoot level enough so's I make allowance for fair-sized game up to a hundred. But an inch might as well be a mile for match shootin' at sixty. And I cain't guess that close by jist trying to allow in aimin'. I got to have some way o' makin' sartin, ain't I?"

"Yes: and you have no elevating rear sight."

"Don't want none," snapped the old man. "But I can see a one-inch black square agin' that white paper. All right. I cut my diamond like this. I cut the swallow-fork so. When I aim, the tip o' my front sight jist touches the tip o' the swallow-fork, and that's

edactly one inch under the center of the diamond. You see?"

"O yes."

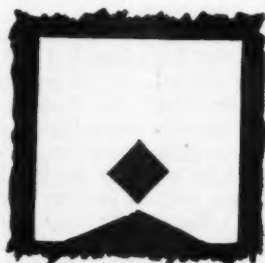
"Then there's another rinktum. The swallow-fork is cut so's the bottom of the wings jist touches the flat top o' my eight-sided rifle barrel when the tip o' the sight grazes the tip o' the swallow-fork. It shows, too, if the rifle's level."

"Well, I'll be darned!"

"You see, every man must fix his own paper. He must place it accordin' to how his gun is sighted and how it shoots."

"But suppose your bullet tears the sighting-point."

"Fix a new paper, then. Sich a shot has no show for beef. You must put up your



Long John's Target

money and try agin', or quit and go hungry. They're killin' the beef over yander, now. The man who makes the best center shot gits fust prize, a hind quarter or whatever he chooses. Then comes the other quarters, saddle, ribs, hide and taller. It's fifty cents a shoot, and ties are shot off. When competition is keen, the owner of the beef makes good money."

Carman scanned the crowd. Nearly all of the men were genuine backwoodsmen, farmers who lived away back in the forest, each on some "spring-branch" of his own, and seldom was seen on the main highways or in town. Most of them were tall, muscular fellows of grave bearing and decent appearance. They were jacks-of-all-trades, but clever at all, seldom hiring anybody to do work for them of any kind.

There were some representatives of a shockingly inferior class: ignorant, undernourished creatures, dull-eyed, awkward, slovenly, clad in rags. They looked like white savages, and Long John sometimes half-pityingly called them "wild men." These were the trash, descended from a vicious and shiftless stock, bred in and in, content with a year-round diet of corn pone and hog's grease, fried cabbage and field beans, despising butter and sweet milk. Most of the muzzle-loaders were in such hands: old relics that the trash retained simply because they had cost little or nothing and were cheap to get ammunition for.

But there were four or five muzzle-loaders borne by men of a different sort: old men of ability and standing, who stuck to their old-fashioned weapons out of a sentiment of loyalty to the tried and true. These were living survivals of a heroic type, the pioneer stock, who, with axe and rifle and little else, won our continent from savagery to civilization.

The shooting began. One of the younger men set up his board, on which he had merely tacked a small bit of paper for a sighting-spot above the cross mark. He laid himself down, rested his .44-40 Winchester on a sack of grain, aimed, shifted the bag to a new position, aimed again, and fired. His bullet struck an inch off center at 3 o'clock. He cursed the glimmer of his front sight.

Another took his place, with a .30-30. He tied a bent leaf over his front sight, as a shade. He shot closer.

Other breech-loaders followed. There were several .38-55s, half a dozen .30-30s, a .25-35, a Savage .303, a .30-40, a .22 high power, a .32 special, some .32-20s and .44-40s. They were plain hunting arms, bought as they happened to come from stock. There was not a single-shot rifle, nor a peep sight, among them. A few of them nipped the intersection of the cross.

Then a muzzle-loader came into action. It was an exceedingly long piece, nearly six feet over all, but very slender, and of such small bore that it took a No. 1 buckshot (.30 caliber, 173 balls to the pound) and was charged with a single dram of fine-grained powder.

The fellow who shot this extraordinary gun was one of the raggedest white men Carman had ever seen. He was as filthy as any tramp. Yet he carried his head high in bravado, regarding everybody with a piercingly direct and insolent stare.

He stepped to the firing point, disdainfully stood erect, threw the long rifle out with fully extended arm, aimed but a second or two, and touched the hair trigger. There was a weak but spiteful crack. The rifle did not lift at the muzzle, but, like a .22, showed no sign of jar. The little bullet cut well into the center of the cross. It was the best shot made, so far, and won a round of applause. The ragamuffin stepped back and tossed his head in challenge.

"When any o' you-uns, with yer fancy guns, beat that, layin' down or propped up, jist send me word. I'll be to see at Clapp's store any Sattaday mornin'."

The crowd laughed.

"A fluke!" exclaimed Carman.

"No, hardly," answered Long John in an undertone. "That feller is the brag squirrel-shooter of the Smoky Mountains. He prowls the woods the year round, allers tryin' that popgun o' his'n, and ain't wuth a damn for anything else."

The success of their champion encouraged the rest of the ragged crew. They followed one after the other, as if a class by themselves, mostly with muzzle-loaders, though a few had rusty old Winchesters of the '73 model. Their shooting, in the main, was only fair. Some of the wildest shots of the match were made with muzzle-loaders.

Carman was disappointed. He had come here expecting to see some of the olden time nail-driving that he had read about. Yet there had been nothing done, so far, that would have caused a flicker of interest on his own home rifle range. He suspected that the accuracy of the old-fashioned rifles had been much overrated.

Meantime, three or four of the old-timers had been busy setting up a rest after their own notion. "Grandpa's arm chair," one of the irreverent youngsters called it.

They drove some stout stakes in the ground, nailed a thick plank on top, like a bench, built a similar but lower bench behind it for a seat, and sloped a long, heavy plank backward from the front bench to the ground, for an arm rest, which was spiked solidly in position. Then they laid a small sack of grain on the front bench to rest the gun on.

The "arm chair" was ready. Long John turned to a quiet, capable-looking man of fifty who, so far, had seemed to be only a spectator, and addressed him:

"Set us a pattern, Mr. De Weese."

"After you, Mr. Gilbert; my boy has gone to the house for my rifle."

"Very well," answered Gilbert, formally, "I'll try a shoot."

Jim brought the old man his rifle, pouch and powder horn. Long John took from the pouch a six-inch tube of sheet iron, open along the bottom so as to clamp over the muzzle end of the rifle barrel. This was a shade for the front sight. It had a sliding trap on top that could be slid back and forth to adjust the light so it would show the top of the front sight clearly, without glitter.

John opened his powder horn, filled a horn charger that hung from his bullet pouch by a thong, and poured the powder down the barrel, which Jim had already wiped out with tow wound round a long cleaning rod. He opened the patch box of the rifle, took from it a piece of twilled cotton about an inch and a half square, rubbed it on some bear fat that was in the box, and laid it, greased side down, on the muzzle. He took from his pouch a bullet that had been carefully rounded at home, laid this on the patch, and pressed the two into the muzzle with his thumb. With a keen-edged knife he cut off the superfluous cloth that projected. Then he took his ramrod and steadily pushed the bullet down till he felt it touch the powder, but he was careful not to crush the powder nor batter the ball. He put a cap on the rifle's nipple, seated himself, and laid the rifle barrel on the grain sack.

Jim had already set up the blackened board, with its white paper, at the sixty-yard point. Long John adjusted the front sight shade. He aimed, readjusted the shade, aimed once more, and fired.

There was a louder report and more smoke than any of the other muzzle-loaders had given out. John's bear gun had been charged with three drams of good FFG, that is to say, 82 grains of powder, and a 219-grain ball.

Jim brought in the board. The big bullet had cut deep into the center of the cross, its own center being a quarter-inch high right. The ball, although of .53 caliber, had not broken outside the edge of the diamond, which had one-inch sides.

Jim whispered to Carman: "Bully for Dad! De Weese will have to strain hisself to beat that shot."

The crowd cheered. De Weese shook hands with Long John, and laughingly remarked: "It will cost me some money to catch up with you, old timer."

Two of the other muzzle-loaders were tried, both of them by young men who shot for their fathers, whose eyes were no longer keen enough for target work. Both bullets came close to the center, but both tore out an edge of the diamond. The young men re-entered. At their second trial, one of them did a little better, the other worse.

Then De Weese's rifle was brought. It was the weapon that Long John had said was the best in the district. It was perfectly plain but had a beautifully shaped stock of curly maple. The metal workmanship was excellent. The gun was in perfect condition, having never been trusted to unworthy hands. It had a 40-inch barrel, weighed fourteen pounds, and was of .43 caliber, taking sixty balls to the pound. There was a full-length shade over the barrel, and the judges all examined it in turn, to make sure that no peep or magnifying lens was hidden within it. This rifle, like Gilbert's, had a gold front sight, very low, and thin on top. The rear sight was a plain bar with shallow nick in the center.

Carman was surprised to see that De Weese used the same powder charge as Gilbert, namely three drams, or 82 grains, notwithstanding that his bullet weighed only 117 grains.

"That's a tremendous charge for so light a ball," he observed to one of the old men. "Doesn't it strip and lead the grooves?"

"You mean tear the patch and stick lead in the channels? No. It jist makes the gun shoot harder and flatter and buck the wind better."

"Humph! If you put a quarter of that powder behind a round ball in a breech-loader it would lead the bore from breech to muzzle."

The native stared at him. "Anybody's be a fool to try it. How would he patch the ball? Besides, look at the difference in twist. A .30-30, for instance, makes one full turn in ten inches. Most muzzle-loaders make only three-quarters turn in forty to forty-four inches. Then, agin, a quick twist, if you had it, in a muzzle-loader, would make a round ball sail off to hell-an'-gone."

"Drift, we call it."

"Well, drift. You cain't jedge a muzzle-loader by a breech-loader. The principles is different, like an axe and a saw."

De Weese used fine linen patches. His bullets were so tight-fighting that he had to em-

ploy a bullet-starter to seat them in the muzzle, before ramming down. His target was similar to Gilbert's, save that the diamond came clear to the lower edge of the paper, allowing for less rise of bullet. Still his gun shot practically pointblank to a hundred yards.

He fired. The judges had to measure his shot to determine whether it or Gilbert's was the better. Gilbert won by a scant eighth of an inch, measuring from center of bullet hole to center of cross.

De Weese re-entered.

Carman began to realize that he was to see some good shooting, after all. The muzzle-loaders were not all in the hands of white trash.

He turned to Long John with another question: "Why are these rifles made so heavy?"

"Wall, I reckon' it because every kind o' weight has been tried. A light barrel vibrates from the jar. A thick, heavy barrel don't, especially if it's soft iron like these. Then, of course, a heavy one can be held steadier, and so can a long one, owin' to the leverage. Besides, a heavy gun don't kick. Ever notice these young fellers flinchin' from their power guns? You don't see non o' us doin' that: we ain't got nothin' to flinch from."

"I suppose everything was tried in the old days."

"Sartin'. There never was two muzzle-loaders jist alike. They're all hand-made. They don't come from no factory. There's been hundreds, yes thousands, o' rifle makers who made 'em all by hand. Every one had a repytation to make or keep. They tried everything."

"Don't you consider set triggers dangerous?"

"Shucks! We were foch up from childhood to use 'em. It's jist as much instinct for us to handle a set trigger right as it is to fork meat into our mouths without jabbin' our eyes out."

"Why is it that some of these fellows using muzzle-loaders can't shoot as well with them as many of the hunters do with breech-loaders?"

"Becaue they ain't got no sense. A man must put some brains into his shootin', if he's got any. Then, too, they don't take decent keer of their firearms. Look at 'em!"

"I don't want to bore you, but there's another question I'd like to ask. I noticed something about your bullet-pouch that puzzles me. On the leather shoulder-belt I see several thongs about six inches long that taper to a point and are twisted at the ends. What are they for?"

"To hold caps. When I'm huntin', I may need to reload quick."

"Still I don't understand."

"I twist the end of one o' them leather strings into a sort of screw, and put a cap on it. It holds. In loadin', I snatch a cap off like that." And John went through the motion like a flash.

De Weese fired four more shots. He would have fired many more, if necessary to carry off first prize; but the fifth shot of his series was almost a perfect center. It was hopeless to try to beat it, and the other old men reluctantly withdrew, or (Continued on p. 17)

Team Training with the Small Bore

By J. B. Smith, C. M. M., U. S. Navy

THE question of training a rifle team to compete in the big service rifle matches, to the average rifle club, is so great a one now-a-days that many clubs who could, if they had such a team, ready trained, go to Wakefield, Sea Girt and then Perry, are now trying to content themselves popping away in their galleries and on their small bore ranges with their .22's.

And, right there, if they went about it right, is where they could make the real prize-winning service-rifle teams! Now, I've started an argument and am right here to back it up! Many of you people have already tried this out long ago and found it impracticable—or so you thought—but I still maintain that

It Can Be Done!

For, along with several others, I've done it myself. If you readers remember, Lt. Commander Wilson's article in the May 15th issue of THE AMERICAN RIFLEMAN, "Shooting Up the Caribbean," gave an interesting account of a team we trained entirely with the .22's.

And again, The National Capitol Club, of Washington, D. C., gives a very good account of itself every year at Perry and they, too, train with the small bore. I could name several others, but I'm going to try and tell you how you can do it, too—not who has done it.

In the very first place, you will have to "knuckle down" to the idea that the first two or three weeks—perhaps more—of your training is to be hard, conscientious work—not just going down to your galleries and shooting a few strings for the fun of it.

First, you had better select the one man in your club who you think would make a darned crabby drill sergeant, if he were in the Army. Most every club has at least one such. Make him chief coach, or instructor—not so much to tell you what to do, for this article will do that, but to see that you do it!

And that's the secret of it—start at the very beginning, no matter how long you've been shooting, and take the same preparatory training that you would if you'd never seen a rifle before. And do it right, not with the "Oh this is Kid stuff" spirit! It may seem long-winded to you old shooters, but I'd rather train most of the absolute tyros who have never had a chance to form any bad habits than some of you old-time shooters who have! That's why the elementary stuff is so darned important. I'd like to cuss a little to make this point more emphatic, but I'm afraid they wouldn't print it if I did.

The first step should be sighting and aiming exercises. A sighting bar should be used for this, as the sights are larger than those on the rifle, and errors can be more easily detected. Also the eyepiece on the sighting bar makes sure that the eye is in the proper position to see the sights in the proper alignment.

The sighting bar should be about as follows:

A wooden bar one inch by two inches by four feet with slot cut half-way through edge

of bar about twenty inches from front sight end.

A tin front sight about one-half inch wide tacked to end of bar.

A tin peep sight about three by three with three-fourths inch hole. Peep sight fits slot cut in bar.

An eyepiece one by three inches, with a very small hole, say three-hundredths of an inch, tacked to breech end of bar. Dull blacken all parts of bar and secure to wooden box about a foot high.

The bar should be used in conjunction with a sighting disc. Disc should be about the size

THIS article, written by one of the men who trained the rifle squad of the U. S. S. Bridgeport which went "Shooting Up the Caribbean" and won all the Atlantic Fleet rifle trophies as described by Lt. Com. E. E. Wilson in the issue of June 15th, is of the utmost value to rifle club secretaries and executive officers and to individual riflemen whose local range facilities do not permit firing the .30 caliber rifle. There are thousands of such shooters, who feel that with their experience limited to small bore work they would have no chance in their State matches or at Camp Perry. That the small bore riflemen trained along the lines so clearly outlined in this article do have a splendid chance with the service rifle in competition against men whose entire training has been with the .30 was most aptly demonstrated in the experience of the riflemen aboard the Bridgeport. This is a definite plan which produced results, and it may be followed to the letter, with the assurance that it will produce results for any other small bore shooter who aspires to the expert rating with the .30 Springfield service weapon.

of a silver dollar, have a small hole in center and a handle about eighteen inches long.

Now that you have your first equipment, explain to your squad the theory of the "Six O'Clock hold." Top of front sight in center of peep and just touching bottom of black. Remember, you're training to use the service rifle now. No freak stunts in sighting, etc. The old approved methods of sighting will work out the best.

Now start the practice. Aim the bar at a sheet of paper and move the sighting disc around at the direction of the man at the bar. When the disc, or bull, appears at the proper alignment with the sights he will say "Hold" and move his away from the sights. The instructor will check up and see that he has the proper alignment. Then the marker, without moving the disc, makes a mark through the center of the disc. This is repeated until three marks have been made. Join these marks to-

gether to form a triangle, and the man's sighting errors can be easily seen. This should be practised until, at 75 feet, the longest side of the triangle is one-eighth inch or less.

Now, the next step is the rifle rest. This can be made of any strong wooden box—an old ammunition box is about right. Cut notches in the ends of the box to fit a rifle tightly. Place rifle in these notches with trigger guard outside the box. Proceed exactly as you did with the sighting bar, except with a disc about the size of a quarter. This is to teach the future rifleman to properly apply the principles of aiming, now that he has learned them with the bar. His triangle should be smaller now. Practise until this can be done.

Of course, the rifle or sighting bar should never be touched during this exercise.

Now that you have practised this until you consider yourself fully able to sight properly and probably are darned good and sick of these "monkey shines," proceed to the position exercises. But I would stop here a minute to say this: The closer your small bores correspond to the service rifle in weight, length, sling arrangement, etc., the better for the position drill. This applies to all small bore practice, but particularly to position drill. For correct positions rank with correct sighting in shooting the service rifle. And I repeat what I said about sighting—no "freak" stunts—no funny positions—the old standard positions, properly practised will turn out the best in the end. You are, in reality, shooting .22's, but in theory you are using the service rifle, and some individual "best position" that you may use with good results with the .22 may get you all "out of time" with the old .30 and its good heavy "punch." So best train with the .22 just as if you expected her to "rear up and jump on you" if you don't hold her right.

The "big time" rifleman who makes a fine study of positions uses a telescope sight. With this he can detect the body movements easily and correct them. Invariably, this study results in abandoning any freak apparent, even to the beginner.

The first step in position drill is to learn the proper adjustment of the sling. The "loop position" is by far the best. By this I mean as follows:

The left arm through upper loop from right to left, and leather keeper pulled down to keep loop well above biceps. However, loop hangs free.

The left hand is placed around and over the sling grasping the rifle well forward, the sling swivel coming against the back of the thumb. Let the weight of the rifle rest across the butt of the thumb and the "heel of your hand," not across the middle of the palm and fingers. This causes the sling to rest smoothly along the hand and wrist, and does away with a lot of tremor otherwise experienced, also brings forearm directly under the rifle.

Don't make the mistake of trying to use too

tight a sling at first. Use it loose at first, and as the boys get used to it, take it up, a hole at a time. Before long they'll be taking it up themselves.

There is such a thing as too tight a sling, causing pulsation, but the beginner won't get it that tight.

The Prone Position

The prone position is the one to begin on. Although seemingly the easiest position, it is the one in which the most errors are found. The body should lie about 45 degrees from the point of aim, feet spread well apart, and toes pointing in opposite directions. Try to hug the ground as closely as possible with the lower part of the body and legs.

Now grasp the rifle with the left hand against the swivel—not part way back to the trigger guard. Many will find this hard at first, but it comes naturally with a little practice. Place the left elbow on ground directly under the rifle, so the fore-arm makes a straight brace. This eliminates the “up and down” movement, so troublesome to many shooters. Now, with this part of the position properly taken, it will be found necessary to raise the right elbow off the ground and roll the upper part of the body up and to the left to place the butt of rifle in position. Grasp the butt-plate, itself, with the right hand and place it in position on the shoulder, then roll back down into position with both elbows on ground and hand grasping small of stock. Press cheek tight on small of stock with eye as far forward as possible without straining the neck.

If the rifle points naturally at the target, your position is approximately right. If not, move whole body until it does. Don't try to strain around and pull the gun on.

Elevate and depress the muzzle by moving the right elbow out or in. Once in position, try and never change the position of the left arm in any way, as a slight variation of that between shots will change your point of impact very noticeably.

Practise the position until you can take it instinctively, and every time the same. It is very strange but true, how, with sights and conditions identical, a change in position will change your point of impact.

And have your regular padded shooting coat for this practice, as it is about as easy to get blistered elbows in drill as in actual firing, and sore elbows have a decided dampening effect on the spirit of the whole thing.

The Sitting Position

Sitting is the next best to prone. When you have mastered this position you will find it both comfortable and steady.

There are more variations of this position than any other. Everyone must find the one that suits him best. The main thing is to find a position that fits one comfortable, so that the legs are at rest and not strained in any way. Whatever position you use, keep the balance of the body well forward. The point of the left elbow should be well over the left knee, and the right inside or over the right knee. Bear jaw hard against the small of the stock, as in the prone position. As in prone, your rifle should point naturally at the target

when you sit down. Practise the one position you feel best in, and get so you can take it naturally from standing, and without loosing any time, as most of your sitting shooting will be rapid fire.

The Kneeling Position

This is the hardest position of all for the beginner, as it is uncomfortable until practised a lot. One rule common to all kneeling positions is that the right knee should point directly along the firing line. Heavy shoes help in this position, as it is permitted to sit on the right foot, either on the side of the foot or on the heel.

The point of the left elbow should rest well over the knee, as there is a flat spot under the elbow which fits a flat spot on the knee and makes a very solid rest. As in sitting, the balance of the body should be well forward.

The Standing Position

Stand half faced to the right, with feet from one to two feet apart, and left arm as far under the rifle as possible. From now on, there are several variations. Many riflemen have favored the “Body Rest” position, but it is an impractical one, and is fast being done away with. Now-a-days one finds the best service rifle shooters using a few variations of the free arm, half as full extended positions.

This is the one position in which the sling may be done away with, unless shooting in a high wind, which naturally makes holding difficult, and believe it is best not to use the sling, as the sling tends to put a strain on the left arm muscles and causes a tremor.

Don't try to meet the recoil, as this will invariably cause “bucking” one form of flinching. Let the body move back with the gun. Don't be afraid to press the jaw hard against the stock. Then your head goes back with the recoil, and the gun can't hurt your face. Don't try to hold the rifle too hard. Try letting it rest easily in the supporting hand and see if it isn't more steady.

And don't try to hold too long. Nearly always the first sight is the best, but if impossible to get the shot off to suit and quickly, take the gun down, take a rest, and begin over. Long holding produces unsteadiness, and the tendency to “Buck it.”

That is about all on the positions, except a lot of practice, so they all become natural. Don't have to stop and think how to take your positions. Do it instinctively.

Trigger Squeeze

Possibly the most important subject, and the one deserving the greatest amount of attention, is the trigger squeeze. It is natural for an untrained man to yank the trigger the moment the sights and bull's-eye become aligned, but to hit that bull's-eye with a yank is a rare occurrence. No one can make a good score until he has learned to squeeze the trigger. This is as true in rapid fire as in slow. The only difference is in the rapidity of the squeeze. Even the most expert riflemen cannot hold long on the bull. But he “squeezes it off” just the same. First he finds the position where his rifle points naturally at the target. Then he “lines her up” and takes up the slack. When the front sight appears under the bull, he starts his squeeze. As soon as he

“swings off the black” he stops the squeeze, but does not release the pressure already applied. When he comes back on again, he continues to squeeze and so forth. The primary object of the squeeze is to get the shot off without knowing it, but with the bull's-eye and sights properly aligned. That sounds complicated, but stop and figure out the squeeze as I've tried to explain it, and you'll see its logical.

Every man is a natural born flincher! If he knows when the shot is going off he unconsciously shuts his eyes and pushes his shoulder ahead to meet the recoil. This is “bucking it,” and usually throws him completely off the target. Whereas, if the trigger was squeezed off with the sights slightly off the bull, the shot will go where held and be a close one.

There is nothing mysterious about the expert rifleman. He has just overcome the natural tendency to yank, gets his shots all off with a squeeze, and tries, rather than to get all bull's-eyes, to get no real bad shots.

This requires a continuous struggle. The difference between being a poor shot and a good one—a good one and an exceptionally good one—is the difference in ability to “squeeze it off.” The whole thing of good shooting is good holding, and the first requirement of good holding, is the right trigger squeeze. When a man has mastered his unconscious self to the extent that he can forget that there is going to be an explosion and shock, and can squeeze the trigger with a steadily increasing pressure until the piece is fired, then, and then only, can he become a good shot. And now comes a strong point in my argument for the small bore. There is no recoil and shock. There is a very small explosion and noise. Therefore, the main inducement to flinch is done away with. One can perfect the squeeze without having to combat the very things that make the squeeze hard to master. And once he has the squeeze “down pat” one can use it on any old gun. That bunch of girls that did such exceptional shooting with the service rifle at Perry last fall, had never fired anything but a .22, and they didn't know any other way but to squeeze it off. So now, though they might have wanted to flinch, they couldn't, because they didn't know just when the rifle was going off, and didn't know when to flinch.

It goes without saying that a great deal of practice at this squeezing is necessary before the pupils are ready to fire a single shot. The proper procedure for this “dry practice” is about as follows: First, adjust sling. Second, take proper position. Third, take up trigger slack. Fourth, properly align sights. Fifth, hold breath. Sixth, squeeze it off. Seventh, call the shot. As I said, this requires a lot of practice, but once it is mastered, we are ready to begin shooting and making bull's-eyes.

Sight Adjustments

It is well to give the men under instruction plenty of practice in sight adjustment. Have targets with two bull's-eyes, set at different angles and distances from each other. Teach the men to so set their sights as to be able to use one bull's-eye for an aiming point and hit the other. This will accustom them to mov-

ing their point of impact any way they want to by the use of their wind gauge and elevation scale.

The U. S. Marine Corps Score Book, third edition, has some very fine rules and information concerning sights setting and "wind doping." These books can be obtained from the International Printing Co., 236 Chestnut St., Philadelphia, Pennsylvania. The price is about twenty cents per copy and they are well worth the price for their windage and elevation rules alone.

Rapid Fire

Exactly the same principles apply to rapid fire as do slow fire. The main difference is the speed with which you apply them. Therefore, it is easily seen why it is essential that the slow fire training be thorough before taking up the rapid. This applies particularly to thoroughly learning the trigger squeeze. The object of rapid fire is just what the name implies, but accuracy should not be sacrificed to speed. Rather, the other way around, at the early part of the training, is better. The mechanics of rapid fire are important. And here again, the nearer your small bore rifle corresponds to the service rifle, the better the practice. This time I'm referring to the action. In this respect, the Model 1922, caliber .22 Springfield is the ideal gun, and, by the way, it can't be beat much in any respect, either.

By learning to work the bolt quickly, and without removing the gun from the shoulder, or the eye from the target, the shooter can save time enough to make his actual sighting almost as easy as in slow fire.

Rapid Fire Exercises

The first, and perhaps the most important rapid fire exercises are more "Dry Practice," manipulation exercises.

First, tie the trigger back to the guard to permit the firing pin to move forward each time the bolt is closed. If this is not done the piece will stay cocked and the bolt action will not be the same as in actual firing. The object of this is to acquire a smooth and rapid bolt manipulation.

Both hands have a part to play in working the bolt. It can be worked in just two motions when the following procedure is followed rapidly. But first, to learn the procedure, do it slowly. With rifle in the firing position, prone, grasp the bolt knob with the right hand. Then, with left hand, roll the rifle over to the right and depress the muzzle until, by holding the bolt rigid, the bolt is lifted and the piece cocked. Now jerk the bolt back to the full extent of the throw and slam it shut again. Reverse the roll with the left hand and the piece will be automatically closed and in firing position again. This method of lifting the bolt handle does away with the biggest "jinx" of all in rapid fire. That is, cocking that old spring in cocking the rifle. There is very little purchase when the bolt handle alone is used to cock the piece. But when one does it with the left hand, just holding the bolt rigid with the right, one has the whole rifle for a lever. Another important point is—you practically do away with two movements of the right hand. One has to lower the muzzle and roll the rifle in order to work the bolt with any degree of ease, anyhow,

and might as well make that do the extra work of cocking and closing the bolt and save that time and trouble.

With the trigger tied back this procedure should be followed until the bolt can be worked about twenty times in as many seconds. It should be practised until the movements become sort of "second nature." Then the shooter is never conscious of having to work his bolt. He concentrates on his holding, sighting and squeezing. This procedure should be practiced in both prone and sitting positions, but the prone requires the most attention. Now practice taking your positions. A good way is to lie down, or sit, whichever you are practicing, and get a good position. Then get up and move as little from that position as possible. Then, when your "commence firing" goes, you flop right back into the same position. Don't move the feet at all when you get up from sitting. Prone and sitting are all one has to worry about, as those are the only positions used now in the service rifle rapid fire.

An old mat or mattress is of material help if one is practicing indoors, as it not only makes a more comfortable place to "light," but is not as slippery as a floor. The army method of taking the prone positions is a good one. It is not only easy but fast. I will try to describe it by numbers, but after a little practice it can be done in one motion and in about two seconds.

1. With rifle at "ready position," throw right foot back and stoop down as far as possible, placing butt of rifle on ground, a little to the left and in front of where right elbow is to rest. Retain grip on rifle with both hands.
 2. Place right elbow on ground.
 3. Place left leg back near the right, feet well apart, and slide well back lying on belly.
 4. Take butt of rifle off ground and place against shoulder.
 5. Lower left elbow to ground. This will bring the firer into position with rifle pointing at target. With practice this position can be assumed rapidly and easily without the bump that often knocks the wind out of the shooter and spoils the first shot. When properly done, the feet will still be sliding backward when the rifle is being placed on the shoulder, and the left elbow will come to the ground about the same time as the rest of the body is in position.
- To assume sitting position rapidly, break the fall by placing right hand on ground slightly back of where one is going to sit.

Practice taking these positions a lot, for every second saved here is another second to use in sighting and squeezing.

Now, assuming that all is O. K. so far, start shooting a little rapid fire. If you are using a 75-foot range I would advise using a round bull's-eye target instead of the silhouette. In the first place, the big silhouette is practically done away with in competition shooting, and I find the shooters hold better on the round bull's-eye, anyhow. It eliminates that "Oh, it will hit him in the shoulder" spirit that accompanies a bad pull on the silhouette. The indoor decimal target isn't so good either. I think the best one to use for beginners at 75 feet is the 50-foot indoor N. R. A. slow fire target using the whole black for a bull. After

a little practice on this, get targets with a bull about an inch in diameter. It is surprising how little difference the reduction of the size of the bull makes in the score. The shooter realizes he has to hold closer, and does it. I say, make the bull as small as can be distinctly seen. The smaller, the better the practice.

In all practice, slow and rapid, shooters should be divided into pairs or shooting partners. When one is shooting the other should watch him and see if he can detect any errors. A shooter will unconsciously do a lot of things he shouldn't. His partner can correct him, and with practice these errors can be eliminated. Watch that the sling doesn't slide down. A loosened sling will change the point of impact. Glance at his eye at the instant of firing and see if he closes it or "bats" it a little. In rapid fire, watch his bolt manipulation, and see that he keeps his eye on the target and his gun at his shoulder. Try and correct anything he does that doesn't look natural and easy.

Now, I've tried to show, step by step, the most important points of elementary training. It is essentially the same as a recruit would receive with the service rifle on an outdoor range, and I think, has a mighty big advantage on starting right off with the old .30. As I said before, there isn't the recoil or noise to contend with, errors can be more easily detected and corrected, and if the training is thorough, the shooters learn to do all the different things subconsciously, and when they get out with the service rifle, they will go right ahead and do them just the same.

If the positions and the use of the sling are properly learned with the small bore, the change of recoil will not be noticed. The padded shooting coat should be used with the small bore. Then the shooters are accustomed to it.

But the one underlying thing necessary to make the whole thing a success is hard work. Put the whole heart and mind to it and neglect no little part of the training. It will even improve the expert to run over the elementary exercises once in a while. Try and forget the lot of little "kinks" that you use in small bore shooting, and practice with one end in view, to become a good shot with the service rifle.

Organize individual matches and shoot courses as nearly identical to service rifle course as possible. Have rapid fire matches. See who can take the best positions and the quickest.

Exert yourselves to make the work interesting, and the squad will stick to it better.

It is somewhat of a monotonous grind, to begin with, but like everything else worth while, a rifleman cannot be made in a minute. But if the will to keep at and try is there it will produce results.

I hope some of you civilian clubs will work it out along these lines, and if this little line of breeze will help put another club or two out to the big matches at Camp Perry, I shall feel that at last I've accomplished something worth while.

If there is anything I haven't made clear, or any questions I might be able to answer, or any arguments you want to put up, fire away. You can always reach me through THE AMERICAN RIFLEMAN.



The American Rifleman

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● FORT CHRISTINA. 1638. ●

Among the earliest American colonizations was the settlement at Fort Christina, Delaware. There, in 1638, lands were obtained from the Indians by Swedes, who came to America under the leadership of Peter Minuit, a Dutch colonizer.

TWO years ago the attendance of civilian riflemen at Federal expense at the National Matches was stopped by the failure of Congress to appropriate sufficient funds for the purpose. There were many who predicted that the civilian rifle shooting game would go by the board as a result. There were club secretaries who

"We have kept the faith"

gave up the ghost without further ado and disbanded their clubs. There were others who, lacking the incentive of a free trip to Camp Perry, showed that their interest in the game was more an interest in a free vacation and who accordingly fell out from the ranks. There have been whole States from which we have heard little or nothing since 1922.

To the everlasting credit of the American rifleman be it said that instances of this kind were in the minority and were completely overshadowed by the splendid spirit of those others who saw in the new order of things an opportunity to clear the deck of just that type of shooter who *did* leave and to enlist instead a class of sportsmen who wanted to shoot for the love of it and who were willing to pay their share insofar as they were able of the expenses involved. There is no gain-saying the fact that in the past two years the rank and file of membership in the N. R. A. and the rank and file of the civilian riflemen at Camp Perry has improved in type over that period when "something for nothing" was the principal selling argument advanced by some local workers in furthering the game.

Now comes the announcement that this year civilian teams will again be sent to the Ohio range at the expense of the War Department. The arrangements have been perfected at a late date; but the short time remaining for the selection of a team will not materially affect those States, those clubs, those individuals who have stayed in the battle during the two lean years. They have played the game. They are ready now when their opportunity comes. And they deserve it! They have earned it, and they and the game as a whole will most assuredly benefit as a result of their attendance at Perry this year. Those others, those who have quit, those who have refused to come in—they will be seriously handicapped by the late an-

nouncement in selecting those who are to make up their teams. Many of them will not be able to organize in time, which is as it should be. They have not played the game, they have earned their fate.

To those who can, "We have kept the faith. We have fought a good fight," it may now be answered, "Well done! And here you have the fruits of victory."

* * * *

WHILE the United States is still in the throes of an era of banditry and kindred crime unsurpassed for violence and frequency in civilized history, it is enlightening to contemplate the infrequency of such offenses within the borders of our northern neighbor.

According to recent official reports, banditry is for the most part an absent element in contemporary Canadian crime.

And this, be it remembered, is in **Banditless Canada** a country where the percentage of men who go habitually armed is far greater than in the United States. And incidentally the Canadian gunman and gangster is also a comparatively rare bird.

When in isolated instances, such offenses as holdups occur, the perpetrators do not wait to take their chances of escape in the great wastes of the Dominion, but strike straight for the United States' border. There is a good and sufficient reason for this. In the first place, the citizen of Canada, like all British subjects, has safeguarded his right to keep arms for his own defense and he is protected in the proper use of his weapons. In the second place, whether deservedly or not, the Royal Mounted, whose men police the Dominion, have built up and maintained a reputation of "getting their man." In the third place the penalties inflicted for banditry are virtually as stringent as for any crime. If your armed Canadian bandit shoots someone he is promptly hanged. If he is caught while armed and in commission of any crime he is given a good stiff jail sentence.

It is a combination of circumstances well calculated to make banditry an unattractive and bootless calling, and is one which if followed in the United States would soon show a marked decrease in the activities of criminals.

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Tuning Up the .45 Automatic

By Gy. Sgt. John M. Thomas

EDITOR'S NOTE: This is one of the very few authoritative discussions on improving the mechanics of the Army automatic. Gunnery Sergeant Thomas is known to the shooting fraternity not only as a highly practical shot, but also as the author of that very instructive booklet "Instructions in Accurate Pistol Shooting."

Accuracy Test

THE locking ribs in the barrel, and the corresponding ribs and grooves in the slide, must lock up tightly so as to allow absolutely no backward and forward play of the barrel in the slide. To test this, take the slide from the receiver or frame as it is sometimes called, also remove the recoil spring, but leaving the barrel and barrel bushing in the slide; now while holding the inverted slide in one hand, grasp the barrel-lugs with the forefinger and thumb of the other hand, and while pressing the barrel towards the sights, try to move the barrel to the front and rear, without unlocking the ribs. If there is any play at all, proceed as follows: Take a small chisel and split the rearmost rib in the slide, until the barrel locks up without any backward and forward play; insert a rat-tail file in the fore end of the slide and smooth down the top of the locking rib where the chisel marks are; then assemble the gun, and work the slide as in loading the gun, and if it is found that the locking rib does not unlock freely, remove the barrel and slightly round off the muzzle end of the rearmost rib on the barrel until the gun unlocks satisfactorily. Proceed in the same manner to split and adjust the other rib in the slide. One should proceed very slowly with the foregoing, and frequently try the barrel in the slide, keeping the barrel-bushing in its proper place. If the rib in the slide is split too much, the back part of the rib must be worked off with the end of a file until the barrel will engage properly.

Fit of the Slide to the Receiver

While this does not effect the accuracy of the gun, it will, if it fits close, preserve the trigger pull. If the slide fits too loosely, it goes forward with a pounding effect that allows the hammer notch to come in contact with the sear nose also with more of a pounding effect than would be the case of a snug fit of slide to receiver, thereby causing the hammer notch and sear nose to become battered up, and the trigger pull continually changing; however, if there is too much friction of the slide on the receiver, the gun will frequently jam in stripping a cartridge out of the magazine and into the barrel. To tighten a loose slide on a receiver, proceed as follows: Remove the slide from the receiver, and the barrel from the slide; take a small brass hammer, and tap in the longitudinal ribs in such a manner as to take up the sidewise play, then tap the longitudinal ribs towards the sights to take up the up-and-down play. If the slide works too hard, use a valve grinding compound and work the slide until it works freely.

The Sights

The top of the rear sight should be filed so that the slant is down and to the front, this in order that there will be no light reflection. To get a good clear image of the front sight, take a new, flat, fine toothed file, and place the flat side on the top of the front sight, and tap the file with a small hammer until it leaves the front sight corrugated like the file. In laying the file on the sight, place it so that the teeth are to the rear, so that the teeth made on the sight will be teeth to the front, which will get away from light reflection and a good clear image of the front sight.

The Trigger Pull

To fix the trigger pull, proceed as follows: Cut off about one-third of the hammer notch, then take a small knife blade file and cut a small notch in the hammer notch for the nose of the sear to rest in; then by working down the face of the hammer notch with a slow cutting stone or a very fine toothed file until you get this crosswise cut in the hammer notch shallow enough to the desired pull. Never work on the nose of the sear, or the trigger pull will not be a lasting one. If there is too much back-lash to the trigger pull, then there will be more or less muzzle-flip at the instant the hammer falls; to reduce the back-lash on the trigger, file a little off the lugs of the sear on the concave side or where the disconnector rests against the sear.

The Stocks

A much better grip of the gun can be maintained when the gun is equipped with new wooden stocks. See that the stock-screws are tight.

Removing Metal Fouling by a Practical Mechanical Method

By Charles A. Chase

I HAVE had occasion recently to learn several things that I believe might be of general interest to other riflemen.

For the past eight years I have been the proud owner of a star gauged Springfield which has proved a constant source of pleasure to me except for one bad habit, metal fouling. As I happen to be an engineer I am compelled to live in various boarding houses as circumstances dictate and so I am badly handicapped in attempting to use the usual ammonia dope for obvious reasons. I formerly evaded the question by the use of mobilubricant until the War Department scared me away from the stuff with their high pressure data. I then resorted to cumrid and hard work with the brass bristle brush, but certainly didn't enjoy the job.

Quite recently I wound up an afternoon's firing by squibbing off a few of my standard reduced loads, (18 grains No. 80 and the 150-grain service bullet) and upon cleaning the gun I was surprised to find no visible metal fouling. I knew that the shooting I had done could be depended upon to produce a fine crop and so I concluded that the reduced loads might have effected the removal. The next time after firing about fifty rounds of wartime stuff I

cleaned the gun enough to observe the pearly little bumps and then slipped in the bolt and fired five rounds reduced loads. Upon cleaning once more I was greatly pleased to find an apparently smooth bore. I have since experimented quite a bit and have found that five rounds will clean out an ordinary dose but not a real bad one such as rapid fire will produce. I judge that the action is mechanical not chemical. I think the bullets at low velocity scrape out the barrel without leaving their own deposit of jacket material behind them. Personally I prefer to save considerable work by the use of the reduced loads as described and I thought that others might feel the same so I am passing on the information.

The other day I took to the Walnut Hill range a model 14-A Remington slide action rifle and some 30 Remington ammunition, both the old loads and the Hi-Speed stuff. My tests were not made under anything like ideal conditions but they do show some general tendencies I believe. I fired about twenty rounds from muzzle and elbow rest at 200 yards on the A target with the old 170-grain bullets. I found that I could call the shots about as closely as I could with the Springfield, probably within six inches from the point of impact. I know this is poor work from a rest but my eyes are not good and so it is about all I can expect. However it seemed to me to indicate first-class accuracy considering the short barrel, bad trigger pull, and coarse sights (Lyman long peep and "solder" bead). Without any other change of conditions I swapped to the Hi-Speed stuff and found myself all over the three ring and some even worse. I couldn't get a semblance of a group. Having read some weird tales about hand vibration with high velocity loads I decided to shoot the stuff offhand to get away from the hard barrel support. As I was running short of ammunition I fired ten shots for group holding tangent at 6 o'clock on the bull. My group was in the three and four ring at 8 o'clock. I found that the ten-inch marking disc would cover eight out of the ten and the other two were about one or two inches outside. This is, I think, evidence of quite satisfactory accuracy because for comparison my offhand limit at 200 yards with the Springfield fitted with the 1922 stock and a Lyman 48 sight seems to be 48 for a ten-shot string on the A target and this 30 Remington group, if centered just right, would have scored just about that.

Chauncey Thomas' recent article entitled "Where Am I?" made me smile as I recalled an incident that happened to me. I was firing at 200 yards offhand, on the A target, wartime ammunition, using alternately two rifles. One was the above mentioned Springfield and the other a Krag Sporter with a 24-inch barrel and open sights. The trigger pull on the Krag was awful, one of these slip and grate combinations that scared the life out of you when it did finally go off. I had never fired the Krag before that day and I have shot the Springfield pretty regularly for eight years. The very best I could get with the dolted-up Springfield was 44 but with the Krag I slipped in a 46 on the first string. Will someone please explain that?

British Heavy Rifles.

(Continued from Page 5)

a violent push, it lacked the sharp blow effect added to the really weighty push behind it.

The Gibbs people have developed a .505, before mentioned, weighing in standard production only ten pounds. As it fires a bullet of 525 grains weight with 2300 ft. velocity when up to their claims, I don't care for any myself, thank you—not in any ten pound gun. The recoil velocity would be $22\frac{1}{2}$ foot seconds and the energy 78 foot pounds. I suppose the man who sups with the devil needs a long spoon, and the hunter who desires to dally with a couple of thousand pounds of peeved African animal life needs something more than a .25-20, but this seems to me to be going just a "leettle" too far.

The American .405 which has appealed to many gentlemen as being a rifle of considerable emphasis, has only a recoil speed of 13.6 foot seconds, and an energy of 26 foot pounds in a nine pound rifle.

The front end effect of the .425 British rifle was as impressive as the rear end effect—and not so hard on the neck.

The big bullet blasted through a half inch steel plate I had for comparative testing, and left a hole like the back end of the N. Y. subway. The plate, which weighed 60 pounds, and which had stood the wallop of everything thus far without a quiver was picked up and knocked three feet through the air and off the target butt where I had it perched and propped by a stick.

The bullet mushroomed but did not break up in eight inch pine boards: Proving that time is considerably a function of bullet break up, the same bullet, shot through boards four feet apart, struck the third board in two pieces, tearing inch holes through it an inch apart, tore through fourth board five inches apart for the two pieces, then one of the pieces broke up and tore two more inch holes by itself. I picked up bits of bullet and core behind the sixth board, showing that once you start a bullet breaking up, it will break emphatically if it has enough time, regardless of resistance behind the first incentive.

We tried a little speed stuff to see how much the double rifle has on the magazine rifle for the time for two shots. Quite a few inexperienced British hunters have been killed or hurt by lions because they got rattled and squibbed off their two shots from the double rifle before the beast got within good hitting distance, and inasmuch as I have spent quite a few years getting acquainted with the bolt action rifles, I felt that I'd rather start with a trifle slower rifle for two shots, and have five of them without stopping the festivities.

This .425 had entirely too long a stock for speedy bolt manipulation, but we got along as follows for shots against time taken by stop watch.

Fifty yards, five shots, time seven seconds, group size seven inches.

Walking, rifle locked at trial, time from word to fire to second shot. Time five seconds, fifteen inches between shots, fudged badly on second.

Second trial, time four and two-fifths sec-

onds, distance fifteen yards, two inches between the two shots.

The lady of the family, who is considerably used to the service rifle, tried this big gun, and took seven seconds, the two shots seven inches apart at 25 yards. While she fired it about a dozen times in various trials, I did not hear any applications for a strict half of the ammunition for this particular rifle.

Sitting at 100 yards the rifle made a group of six and a half inches for the five shots, but how much of this was due to poor holding and fearful expectation, and how much to cartridge, I don't know. I do know that I didn't care for any portion of it on the muzzle rest table after one trial.

I once did a lot of shooting, both for center shooting of the two barrels, and for accuracy of either one, not to mention time trials, with a medium power double barrel express rifle.

The comparison of the two types of powerful rifle persuaded me that while in very ticklish situations the double rifle may be fired like a shotgun and with the same speed, yet the magazine rifle of positive function is so close to it for the second shot, and so much more effective with the remaining three or four shots that it is a better rifle for the average dangerous game situation.

Training Haitian Gendarmerie

(Continued from page 8)

"America First, Haiti Second," and with this ambition before them, the work of choosing and outfitting a team was begun. The remarkable spirit which characterized the Haitians in their efforts to put across a team is exemplified in the manner in which the team was financed. To get together the fund of something more than \$5,000 every officer and man in the Gendarmerie voluntarily subscribed to this fund 5 per cent of his pay per month for a period of five months. This system gave every member of the organization a personal interest in the team.

Out on the district ranges competitions were held again over the special course and every man who made more than 205 out of 250 was ordered into Port au Prince. This netted a squad of about forty officers and men who last January began a four-months try-out. As the try-out progressed men were eliminated here and there when it became plain that they would not make the grade, until only twelve remained. From these, during the final three weeks of the try-out eight men were picked.

To appreciate what followed it must be borne in mind that until about six weeks before the try-out was completed, not a man jack of the squad ever fired at a greater distance than 200 yards. Under the peculiar climatic conditions of the island, wind doping was to a great extent unnecessary considering the short range, and during less than a month and a half, it was imperative that the team squad not only be grounded in elevation and windage adjustments but also must become accustomed to shooting at 400, 600 and 800 meters.

The sight setting principles were carefully explained in lectures similar to those given to recruits in our own Army and Marine Corps.

The distance practice was gained by "stepping them back" from the short to the longer ranges, and so well did the work progress that by the time the team was ready to sail for France they were doing more than merely creditable work.

Incidentally the team squad was taking on the characteristics of any well organized rifle team. When the rifle training began in Hiati, it was positively dangerous to permit the gendarmes to have loaded rifles, and on most ranges the officers were compelled to provide racks and see to it that no man had a gun in his hands except on the firing line. Also little attention was paid to keeping rifles in condition. But in these matters the Haitian riflemen today are if anything a bit more careful in handling a rifle than is the average National Match group, and their weapons are invariably in the pink of condition. They have even acquired the alibi habit. Nothing is ever wrong with the shooter; it's always the gun or the ammunition.

Having been provided with heavy barrel Springfields of the same design as those used by the United States team and of which the Haitians were inordinately proud, the team arrived in France and locating a private range at Rouen permitting shooting at 300 meters where they trained until about two days before the International Matches opened.

In the light of what followed there is every reason to believe that had the weather been warm instead of markedly cold, the Haitians would have shown up near the top in the International. As it was the chill got to the blacks who were used to a tropical climate, and during the first two days their scores suffered in consequence, landing them fourteenth from the top when the match was two-thirds finished. The third day, however, was quite warm, and the Haitians for that day's shooting were beaten only by the United States and Switzerland, which landed them at the finish in tenth place.

Good weather attended the Olympic shooting and the Haitians from the start took a good stride and held it, tying France's total for second place but being outranked for this honor. The shooting of the team attracted universal attention. In fact so highly was the ability of the Haitian marksmen regarded that members of the team were requested to coach Czecho-Slovakians, Roumanians and Belgians in the Olympic Individual Match, and in this event the black coaches with great faith in the rifles, insisted that the men they were coaching use the heavy barreled Springfields which they loaned them for the occasion.

Those who have been closest to the Haitian marksmen declare they are childlike, obedient and not particularly bright. That they are capable of very creditable work so long as they are properly coached, but that left "on their own" are likely to prove indifferent marksmen. Under these conditions, the credit for the performance of the black riflemen redounds directly to the men who organized, trained and coached the team during the matches and to the system of training which was adapted from that now in vogue in the Regular establishments of the armed forces of the United States.

The Olympic Shooting

(Continued from Page 7)

Below is presented a list of the point-winners in the event:

1. Boles, United States	40
2. Mackworth-Pread, England	39
3. Olsen, Norway	39
4. Hultberg, Sweden	39
5. Lintbula, Finland	37
6. Liberg, Norway	36

Of the other American entries, W. Stokes turned in 35, Fenton 34, and Coulter 32.

On the next day the singles shot team match was fired and again the American showed well, landing third place. The teams stood:

1. Norway	160	4. England	136
2. Sweden	154	5. Finland	130
3. United States	148	6. Hungary	97

Boles again led the Americans with a 41; W. Stokes turned in 38, Coulter 37, and Fenton 32.

The double shot firing (two shots in one run of the deer), which occupied the next two days, is a type of firing that requires a maximum of special training; in consequence, the Americans did very poorly at it, unpracticed as they were. In the individual doubles they failed to place at all. Boles made 64, Coulter 62, W. Stokes 60, and Fenton 49. The place-winners were as follows:

1. Olson, Norway	76
2. Mackworth-Pread, England	72
3. Swahan, Sweden	72
4. Landellus, Sweden	70
5. Liberg, Norway	70
6. Tikkanen, Finland	69

In the doubles team match Coulter turned in 65, W. Stokes 63, Boles 62, and Fenton 43, for a team total of 233. This gave the United States fifth place. The teams stood:

1. England	263	4. Finland	239
2. Norway	262	5. United States	233
3. Sweden	251	6. Czechoslov.	225

The British team, which won this event, fired double-barreled rifles, a type of arm that is particularly adapted to the double shot match. Also they fired from a sitting position, in which respect they varied from all the other competitors, who fired offhand.

In the point total for the running deer events the leading teams stood as follows:

1. Norway	32	4. United States	16
2. England	23	5. Finland	8
3. Sweden	19		

The Norwegians who are unquestionably the leaders in running deer shooting, use Krag military rifles, and in firing the double shot they lower the butt of the rifle from the shoulder in reloading. But they are thoroughly familiar with what they have to do, and they get results. Our shooters can not cope with them successfully without considerable special training. With the aid of a reasonable amount of such training they should be able to hold their own quite readily. For the next Olympic match the United States should have a separate team specializing on running deer shooting, as did the nations which were most successful at Versailles.

The only pistol event on the Olympic program was fired at Chalons on June 28. It was an event fashioned after the European system of duelling practice. The shooter was required to fire rapidly at the silhouette of a man at a distance of 20 meters. The pre-

liminary shooting called for six shots in ten seconds and the shoot-off for six shots in eight seconds. Frazer, Whaling, Betke, and Bailey were entered in the match for the United States. Only eight of the field of seventy-six competitors made perfect scores on the three preliminary strings which opened the match. Among these there was only one American, Bailey. There followed a series of five shoot-off strings, with competitors rapidly dropping out, until at last only Bailey and W. Carlberg, of Sweden, were left. Neither had yet missed the silhouette figure. Again each scored six hits. Then on the seventh string an empty cartridge became jammed in Bailey's gun and he was forced to lose precious seconds extracting it with his fingers. With the jam cleared, he pumped his remaining shots into the target at a desperate speed and still managed to score six hits. His opponent meanwhile, had become disconcerted by the irregularity in the sound of Bailey's firing, and he missed twice, giving Bailey the match and adding ten points to the American point total. Following is a resume of the shoot-off:

1. Bailey, United States	6-6-6-6-6-6
2. W. Carlberg, Sweden	6-6-6-6-6-6-4
3. Hannellus, Finland	6-6-6-6-5
4. Amaya, Argentina	6-6-6-5
5. Assinalde, Argentina	6-6-5
6. De Castelbajac, France	6-5
7. Sarlin, Finland	6-5
8. Liberg, Norway	6-5

A final analysis of the 1924 Olympic rifle and pistol shooting competitions discloses that the United States won four first places and totaled 59 points. Norway came next with two first places and 32 points (all gained in the running deer events). Sweden scored 26 points, with no first places; England made 23 points, with one first place; France 15½ points, with one first place; Finland 13 points; Switzerland 9 points; and several other nations a few points each.

Short Shells in Long Chambers

By Chas. Askins

I RECENTLY tried a fine 16-gauge Parker which was chambered for 3-inch cases. The gun was a heavy arm, 16-gauge barrel placed on a 12-gauge frame, barrels 30-inch, full choked, a good 75 per cent gun with proper loads, in shells long enough for the chambering.

I shot this gun with a heavy load containing 1½ ounces of shot, placed in 29/16-inch cases. The pattern fell off to 60 per cent or a trifle less, spreading an inch to the yard; that is, across a 30-inch circle at 30 yards instead of at 40. The pattern was round and even, and the gun did fine work in upland shooting, but the gun had no greater range than a 20-bore with an ounce of shot.

I believe this gun and ammunition shot according to Hoyle. A fine way to open up a gun without boring out the choke is simply to put in a cartridge too short for the chamber. On the other hand, the Parker method of using a cartridge one-eighth inch longer than the chamber is a fine scheme for securing the very closest patterns.

An Old-Fashioned Shooting Match

(Continued from Page 10)

went on contesting for second place. Only one of De Weese's five shots cut inside the edge of the diamond, which had one-inch sides.

This veteran marksman, having carefully cleaned and greased his rifle, had time on his hands now, and nothing to do. Carman got an introduction to him and they had a little talk. De Weese seemed not at all elated, but took his victory quite as a matter of course.

"This rifle," he said, "has been in our family for three generations. It has always been a prize-winner. The man who made it was an artist; just as the man who makes a superior violin is an artist. And the old gun has always had the best of care. I unbreeched it not long ago and didn't find a speck of rust in the bore, from end to end. There are mighty few old guns in that condition, nowadays."

De Weese proved to be a man of some education, using excellent English, though born and bred in the mountains among people who spoke the dialect.

"You are satisfied that this rifle is more accurate than any other, at short range, that you can get?"

"I've never had any of the fancy breech-loading target rifles made just for that purpose, nor any of the special ammunition that my boy says is issued for match shooting—he was on one of the Army teams. But I've owned or used nearly every model and caliber of American hunting rifles, shot them with factory ammunition, and never found one that would do the work of this old-timer at this particular style of shooting."

"It must have an uncommonly good barrel."

"It has. But it's not all in the barrel. The sights suit me, the trigger suits me, the hang of the gun suits me. I can aim and fire this old rifle with less bobbing around—less guesswork—than any other I ever handled."

"You wouldn't use it for hunting?"

"No: it's too heavy for that, though I've known old hunters who wouldn't carry a lighter rifle than this and they got the meat."

"Do you consider that the average muzzle-loader is more accurate than the average breech-loading hunting rifle, up to a hundred yards?"

"No, not in the condition most of them are in today. They would be, if new, and shot by men who understand them. Those who have not used muzzle-loaders a good deal don't know how to bring out their fine points. It's almost a lost art, like shooting the bow and arrow. The muzzle-loader's day is past. It is too clumsy, too slow to reload, and so it's nothing now but a curiosity, a relic. But it was a grand weapon in its time. So was the sword, the bow and arrow. And the breech-loader will pass away, too. We are even now passing into the age of poison gas and bombs dropped from the sky. Then will come the 'death ray,' the 'diabolic ray,' that is already being talked about. Sportsmanship will pass, as chivalry is passing. And then?"



Conducted by Capt. Jerome Clark

Some More Gun History

By L. D. Satterlee

I HAVE read with a great deal of interest Dr. McHenry's "Hand Gun Fodder" in *THE AMERICAN RIFLEMAN* for July 15, 1924, and wish to make a few comments on it.

It is doubtful if the .56-52 Spencer cartridge was made during the Civil War, as it came later, about 1867 or 1868. The rifles and carbines used in the Civil War had a bore of .52-inch and used what was then called the No. 56 cartridge, now called the .56-52 Spencer. The first of the rifles were delivered to the War Department Dec. 31, 1862, although it is said that the Navy Department obtained the first 1,000 made and they were used on board the gunboats operating on the Mississippi. Coincident with this delivery, Mr. Spencer made a trip through the South and West, demonstrating the gun to the Federal officers. The gun was brought to the attention of Colonel Wilder, who had been transferred from the East. He organized a brigade of mounted infantry and armed them with this new rifle. The first general engagement was at Hoover's Gap, Tenn. It is said that Spencers were used at the Battle of Gettysburg, but these must have been rifles, as the first carbines were delivered Oct. 3, 1863. These rifles had a 30-inch barrel, three bands, and no ramrod. The carbines had a 22-inch barrel. Neither was equipped with Stabler's cut-off as yet, and both models used the .56-56 Spencer, which was the only Spencer cartridge made at that time.

Towards the last of the War, the Ordnance Department decided to reduce the caliber to one-half inch, and accordingly the .56-50 Spencer was evolved. It is unlikely that any .56-50 guns were used in the Civil War, as a great confusion in the issuing of ammunition would have resulted from the use of both calibers. A carbine that has a 22-inch barrel and is equipped with a cut-off is probably a .50 caliber. The Burnside Rifle Co. also made 30,496 Spencer carbines for the War Department, delivered between April 15, 1865 and Oct. 31, 1865. These are probably all stamped "Model 1865" have a 20-inch barrel and use the .56-50. None were used in the Civil War, but afterwards they were used by the Cavalry previous to the introduction of the Springfield carbine.

A good way to test the bore of a Spencer

is to insert a .43 Spanish cartridge, ball end first, into the muzzle. If the bore is .52-inch, the cartridge will enter up to the rim, making a good fit. If of .50-inch bore, the cartridge will stop just above the neck of the shell.

The writer has a Spencer carbine stamped "M. 1865" sighted for 900 yards. This takes the .56-52 much better than the .56-50. While the cartridge companies state the .56-52 is for the rifle, yet it seems to have been used in some varieties of the carbines. A .56-52 carbine is also advertised by Chas. Folsom in Barber's Crack Shot 1868. Another peculiar fact is that the UMC makes the diameter of the .56-52 ball as .532-inch, evidently for the old model .52-inch guns, while the Winchester makes the diameter of the ball .512, evidently for the new model .50-inch guns. It is believed the Winchester are right, as advertisements of the Spencer Co. in 1866 to 1868 designate the caliber as .50-inch.

The Burnside Co. also put out a rifle which is about two inches longer than those made by the Spencer Co. The gun has two bands instead of three, and is equipped with a ramrod. No record to show that the output was obtained by the War Department and it is a puzzle what they were made for. Only an inspection of a Spencer catalog of about 1868 or 1869 will solve this puzzle of the calibers, and the writer wishes to ask if any readers of *THE AMERICAN RIFLEMAN* have such a catalog. Possibly some veteran sportsman eighty years young or so, may remember the reason for the introduction of the .56-52 and what models it is supposed to be used in.

It is very doubtful if the Smith & Wesson had a .32 C. F. cartridge revolver that was a forerunner of the Russian Model of 1870. Norton in his "American Breech loading Small Arms 1872" states that the ejecting device on a break open revolver was invented by W. C. Dodge about 1861, but he being employed in the Patent Office could not get a patent. He resigned, however, obtained a patent in 1865. In the spring of 1869 he sold his patent to Smith & Wesson, who immediately got up a break open model, presumably the No. 3 or Army size. This was probably rim fire using the .46 short and not a .44. It was tested by the St. Louis Board of June 1870, who recom-

mended that the Smith & Wesson be made center fire. In Dec. 1870 the Ordnance Department ordered 1,000 Smith & Wesson revolvers cal. .44 and it is believed these were the S. & W. American .44's, the diameter of the cartridge being about .436, the same as the .44 long rim fire. The first revolvers supplied to the Russians no doubt used the .46 short, then the change was made to the center fire .44 Russian, as the diameter of the .44 Russian shell is the same as the .46 short, namely .455 inch. The Remingtons, upon the expiration of the S. & W. patent April 3, 1872, converted many of their powder and ball revolvers to use the .46 short and .38 short rim fire, and you will find full page advertisements in the *Army and Navy Journal* of 1872 to 1876 describing them.

The writer cannot find anything to show that S. & W. introduced a .32 S. & W. c. f. revolver before 1877. A UMC list in back of Norton 1872 lists only five center fire cartridges, namely the .50-70 Government, .42 Russian, .43 Spanish, .45 Sporting, and .58 Musket. Johnston's catalog of 1876 does not mention a .32 c. f. and in his list of S. & W. revolvers states that the .32 rim fire tip up has been discontinued and to use the Standard, but does not offer for sale any .32 c. f. revolvers. A Smith & Wesson advertisement of 1877 lists the Russian model and New 30 c. f. Model only, and it would seem that if the .32 C. F. was in existence at that time it would have been mentioned. In 1881 S. & W. advertise four calibers, namely, 22, 32, 38, 44. The .22 caliber was probably the tip-up.

The Moore test cartridge revolver, usually known as the National, is mentioned in an 1864 catalog I have. It is also advertised in the *Army and Navy Journal* May 21, 1864. It therefore cannot be said to have followed by several years S. & W. first C. F. revolvers.

The Colt Company probably introduced their .45 Single Action Army or Peacemaker late in 1872. According to the best sources I have, it was not adapted to the .44 Winchester C. F. until 1878, or six years later.

The difference of opinion as to the exact dates in the History of Firearms indicates a great need for research by interested collectors, especially by those who live in the cities where these guns were made, such as Hartford, Brooklyn, Bristol, Newark, Providence, Lowell, Boston, Philadelphia, Amherst, Springfield, Ilion, New Haven, Worcester, Newburyport, etc. The back files of old newspapers, deeds, mortgages, abstracts, etc. would settle many disputed points. Where, for instance, are all the old firearms catalogs gone to? Simply stuck in the stove! The writer has a Sharps catalog of 1859 and 1879. Who has any of 1871 and 1874? When did Sharps introduce his 40, 44, 45 and 50 caliber center fire cartridges? No one seems to know, and you cannot find any one that does know. If the date of the Battle of Bunker Hill were as much in doubt as some of these gun facts, history would be some study. *THE AMERICAN RIFLEMAN* should have a question box, and it is quite evident that there are enough readers who would make a stab at answering some of them.

Military Museums

BY CHAS. J. LISLE

THE more arms I gather together the more I fear fire or robbers for the cumulative effect of every unique or historic arm I add makes every other arm more valuable. And as I grow older I have an increasing fear of animal-like greed. Living in the capital city of Oregon, I went to the Governor and to the Secretary of State who is custodian of the State House, to see if they couldn't make a place for a State arms exhibit and relieve me of all my fears.

"Sure we can," said the Governor. "Plan out what you want, and I'll ask for a legislative appropriation for a place to put it."

"That would be easy," said the Secretary of State. "We have plenty of fine corridor room in the State House, and it would be possible to make up a State exhibit that would be a real credit and a boon to the people interested in military history. I haven't any money now, but I'll apportion some from the next legislative appropriation to care for a really wonderful military exhibit worthy of a great State."

My good friend Don Wiggins, with whom I have swapped many an interesting arm, and in whose acquisition of good historic pieces I am almost as much interested as in my own, has willed his collection to the State in the event of his own passing out.

"I'd hat to see these historic arms that I have worked so hard and so lovingly to preserve, fall into unappreciative hands that might junk them, destroy them, scatter them nobody knows or cares where," is the way he states the case. "I will loan them to the State for the present, so that ten or a thousand people can enjoy them to where one sees them in my home; and then the State can have them forever if it will provide adequately for their care. They represent so intimate a part of the State life that they ought to be provided for by the State itself, as of priceless historical value."

That has been my point of view for many years—though I have not yet agreed to the will portion, since my own son is almost as deeply interested in arms as I myself, and he will keep them for the future to enjoy. Some of my most prized arms have been in another State historical exhibit for fourteen years, loaned on a receipt from the custodian; it is not probable that I shall ever take them away. The 250 weapons that I have gathered since that first loan, really ought to be similarly made available to the public.

We believe that it will be possible to interest many other historic arms collectors in this same way, and build up a State arsenal that will be a really notable historical exhibit. Personally, I'd hate to be such a hog as some collectors of money and other curios, who selfishly keep all the benefits locked up in their own homes, to which they are afraid to invite any but hand-picked friends lest something be carried away. If, as most men say, it is the ownership that counts, one can still own these loan collections that the State will guard and exhibit, and the owner can crow over a thousand interested admirers to where he can invite only one to his home to envy them. I believe I shall find a lot of whole-hearted liberal givers and loaners in this crusade.

We shall ask to have some recognized authority and interested arms man appointed as curator, with a small sum for shipping, repair, even for purchase of arms if necessary for the good of the museum. This will give it a responsible head and a definite direction that it needs.

When you come to Oregon next summer, as you will want to do, and ride over the most wonderful highway system in the world, don't fail to stop in Salem to see the State Arsenal. We'll promise you an eyefull of real historic American arms to make you glad all the rest of your years—that is, if the legislature and the other fellows kick through as we are sure they are going to do.

* * *

A Question Column

TIME and again readers of this Department have urged the Editors to establish a question-and-answer column through which the antique arms enthusiast can thrash out knotty problems which have arisen to puzzle him, and which call for special data which he has not available.

Basically the idea is a good one; in practice however experience has shown that the question and answer idea as applied to the collection of antique arms does not work out at all satisfactorily unless unlimited space is available together with the services of an expert who has nothing else to do but answer a voluminous correspondence. And even then no one expert has at his finger ends material from which the answers to a thousand-and-one questions may be drawn.

A question and answer column in connection with antique arms usually results in a flood of inquiries which are unimportant and often senseless, although asked in good faith. For every intelligent inquiry which is likely to develop information of real value to the collecting fraternity, there are literally dozens of those which are of no consequence whatever, and the only result to be expected from such a state of affairs is either that a great deal of time is expended replying to inconsequential inquiries or if they are ignored, bad feeling results.

There is however, a compromise, which will serve the purpose of bringing out points of widespread interest and excluding the trivial. The Editors of "Firearms of Yesterday" are glad to encourage any reader, who has heard of some unusual firearm, who is puzzled concerning some unusual feature in an antique weapon, or who desires information concerning any class of firearm, to embody what he already knows on the point in question, in a letter putting it in story form. In this way what the inquirer already knows, or believes to be true, can be published as a distinct item, and other readers can be invited to comment upon it or send in additional information. Such inquiries as are unimportant in themselves, and not likely to be of general interest, can be excluded in the usual course of editing the department.

The Editors do not wish to overlook any avenue through which information can be either gathered or disseminated for the benefit of the clan, and are convinced that this method will serve the purpose far better than a cut and dried question and answer column. So "come across with your dope."

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"Muzzle Rifling"

FREQUENTLY the young collector, chancing upon a flintlock pocket pistol of Queen Anne or slightly later vintage, is thrilled by the discovery that the cannon-shaped barrel which appears on many such weapons is fitted with what he takes to be "muzzle rifling."

This so-called "muzzle rifling" appears in the shape of coarse grooves which appear deeply star-shaped at the muzzle and taper off into nothingness a bit farther down the barrel.

That this was an attempt to imitate rifling, or an experiment with short grooves and lands to give the ball a spin at the instant of delivery is entirely erroneous. The long and short of the muzzle-rifling myth is that the grooves were cut with no reference to the ballistics of the weapon, but were nothing more intricate or interesting than sockets cut to engage the teeth of a spanner which was used to unscrew the barrel.

Pistols with the spanner notches in the muzzle in practically every instance will be found to have been of the pocket type and made for breech loading. With the barrel unscrewed it was a relatively simple matter to stick a bullet into the barrel, force it a bit forward and pour in behind it a charge of powder, tightening up the barrel with the spanner. Although this system might appear to be just as complicated as pouring the powder down the muzzle and ramming the bullet home on top of it, as a matter fact a little practice made the breech loading system considerably quicker.

And there is another and still more practical reason ascribed to the breech loading system for pocket pistols. These little weapons, as their name implies, were carried in the side pockets. They were subjected to considerable bumping around and were left loaded for long periods. It was found with the first types of these pistols—those which were loaded from the muzzle—that the bullets frequently worked loose, powder charges were spilled and the owner left with an impotent weapon in time of stress. This necessitated the use of an oversize ball, which was with difficulty loaded from the muzzle. The breech-loading system was then devised, the barrel being larger at the breech than at the muzzle, what we might term a "choke bore."

* * *

Pistol Masks

BUTT masks and trigger-guard ornamentation are among the surest indications of the period to which a specimen of British flintlock hand gun belongs.

The mask which corresponds to the butt plate of a rifle was, especially during the reign of Queen Anne, made the subject of wonderfully artistic engraving and high relief work in silver.

In trigger guard ornaments, the long narrow plate running out from the guard proper was popular from 1730 to 1750. The acorn ornament followed from 1745 to 1780 and the pineapple ornament from 1780 on into the nineteenth century.

* * *

A Correction

In the August 1st issue, the date of the King James gun described under "The Gun that Talked," should be 1665 instead of 1765.



Conducted by ————— C.B. Lister

THE SEASON FOR BEGINNERS

Summer is the season for beginners on the rifle range. When enough of your regulars are away on vacation to make it out of the question to stage a regular match, there will still be enough of them left around to take a lively interest in the "dubs" who show up at the range looking as though they would like to shoot. And with no competitions to distract their attention, the old-timers will be feeling all the more like teaching the beginners all they know. The same call of the outdoors and desire for a change which sends your regulars away from the range for a couple of weeks will appeal to those folks in town to whom the smell of powder and the open places represented by the rifle range will come as a pleasant and very acceptable summer diversion.

There are a lot of youngsters in your community who are working this summer and have more money of their own to spend than they had during the school period. Not many of them work Saturday afternoons. This is your golden opportunity to get hold of them and interest them in the game, while they have the money to buy equipment and ammunition.

The sporting goods stores are busy places at this time of the year. Why not try a few show-cards and a little folder describing the facilities the club has to teach beginners, to be displayed on the counters of your local dealers. The novice is the life of the shooting game. Without him, it will die of dry rot, and there is no better time to catch the novice in a susceptible mood or to get your regulars to take an interest in the beginners than during the summer months. It is a habit with some clubs to cease to function after the Fourth of July. It is a habit with other clubs to get more publicity during the summer months than at any other time.

Shooting is an outdoor sport, and summer is the outdoor weather. Get busy and forget the summer slump. It doesn't exist except in your own mind.

* * *

WASHINGTON STATE COMPETITIONS

The Annual State Rifle Competition of the Washington Association will be held on the range at Camp Lewis, August 3rd, commencing at 10 A. M. The competition is open to teams of clubs affiliated with the N. R. A. and teams from the various Regular Organized Reserve, R. O. T. C., and C. M. T. C. outfits within the State, and to teams from the National Guard of any State. The conditions call for teams of six and allow any rifle, any iron sights, and any ammunition. The course of fire is 200 yards slow fire, ten shots, 300 yards rapid fire on the "D" target, ten shots, and 600 yards slow fire twenty shots. Two sighters are permitted at the slow fire stages. In addition to the teams, an individual competition will

be arranged especially for alternates, delegates to the meeting of the State Association, and other individuals not members of teams. This match will be fired under the same conditions and over the same course.

Forty targets will be available on Range A at Camp Lewis for the competition, and it is to be anticipated that a real match will be fired.

The annual meeting of the State Association will be held in the morning at which a number of important matters will be discussed, including the financing of a Washington State Civilian Team to the National Matches this year. It is to be hoped that through the activities of the riflemen themselves and by the assistance of their newspapers and business men's organizations the State may be able to realize its desire to be represented in the big match.

* * *

INFANTRY TRY-OUTS COMPLETED

Lieut. M. L. Broderick, of Fort Benjamin Harrison, Indiana, won the United States Army infantry rifle championship in the final shoot today in the ten-day try-out for the infantry National Match team.

Lieut. L. V. Jones, of Fort Benning, Ga., the old champion, who held the lead yesterday, was forced into second place.

In the face of conditions declared by Army officers to be the most unfavorable for long range shooting ever encountered in the Fort Niagara range, Lieutenant Broderick shot a score of 277 for a ten-day total of 2,811 out of a possible 3,000. Lieutenant Jones shot 272 for a total of 2,809.

Lieutenant Broderick was presented with a silver cup given by Captain J. H. Knuebel, military instructor of the Atlanta, Ga., high schools, the team coach. The presentation was made by Representative S. Wallace Dempsey.

Third place on the infantry team was taken by Lieut. H. B. Sheets, of Scofield Barracks, Hawaii, with a total of 2,803. Capt. L. S. Spooner, military instructor at the University of Pennsylvania, was fourth with 2,798 and Sgt. P. F. Mollerstrom, of Fort Cook, Neb., was fifth with 2,782.

Fifteen others finishing the try-outs in the order named, were designated members of the infantry National Match team as follows: Capt. P. W. Mapes, Fort Sam Houston, Texas; Warrant Officer, Henry Whitaker, Fort Riley, Kansas; Sgt. J. E. Jaynes, Infantry School, Fort Benning, Ga.; Capt. M. F. Shepherd, Fort Thomas, Texas; Lt. T. H. Kron, Fort Jay, N. Y.; Capt. C. H. Karlstad, Fort Benning, Ga.; Capt. J. W. Thompson, Fort Slocum, New York; Captain S. S. McLaughlin, Camp Meade, Md.; Sgt. Charles Hakala, Fort Screvin, Ga.; Capt. J. W. Starkey, military instructor at Wofford College, Spartanburg, S. C.; Lt. A. K. Robinson, Fort Sam Hous-

ton, Texas; Sgt. M. A. Zavadsky, Fort Screvin, Ga.; Cpl. Grant Burnham, Infantry School, Fort Benning, G.; Lt. R. R. Street, Jefferson Barracks, Missouri.

The Infantry's pistol experts, said by Army officers to have given promise in their training period of turning out one of the best teams in the Army's history, will enter a three-day competition for team positions next Wednesday.

* * *

THIS IS WHAT WE HAVE BEEN SAYING ALL ALONG

Whenever the subject of anti-firearms legislation has come up, we have taken the stand that instead of doing everything possible to prevent a house-holder from having a gun, laws should be passed requiring him to own one and making it mandatory that he know how to use it. Chief of Police John M. Britton, of Charleston, West Virginia, seems to have the same idea. An item from the *Pittsburgh Gazette-Times* of July 18th says:

Chief of Police John M. Britton today offered to teach women to shoot. In announcing the opening to them of the police pistol range in the basement of the City Hall, he stated that the department's best marksmen would be assigned to give lessons to all women who wished to familiarize themselves with the use of a pistol.

The Chief's invitation was issued after a Charleston woman called him over the telephone this morning and asked why police did not come to her home last night and arrest two would-be burglars, who, she said, she observed on the premises for 15 minutes. Asked if she telephoned the department, she said no, she was afraid to go in the room in which was a telephone. The Chief then asked her if she had a pistol in the house and she replied in the affirmative, but explained she did not know how to use it.

* * *

THINK IT OVER!

Clubs that are having trouble making up their minds as to whether they will send a representative to Perry will find the following paragraph, reprinted verbatim from a letter from Mr. J. C. Burkhart, secretary of the Santa Barbara Rifle Club, very interesting.

That an instructor with National Match experience is a great asset to a club is demonstrated at each one of our shoots in our Inter-County League. The tail-end club was joined by a man who had been to Camp Perry, and who, while a very good shot, probably never came in the money at Perry. The result is that that club wins consistently, due mainly to having been beaten into line by one who has had instruction.

* * *

WE MIGHT COPY FROM THE FILIPINOS

Each week from June 29th to July 27th, the Target Shooting Society of Ilo Ilo, Philippine Islands, conducted a rifle and pistol shooting tournament divided into a total program of thirteen competitions. In addition to the usual Members' Matches, we find in their program the "Press Pistol Championship Match of 1924." This match was open to teams representing any newspaper in the Philippine Islands. The interesting part of it is that nine of the Island newspapers entered teams, including *La Prensa*, which is probably the most widely read Spanish language paper printed outside of Europe. How much additional publicity must be derived from a match, whether it be team or individual, in which the representatives of the press took part! Generally, newspaper men are a live wire bunch, and if the matter was broached from the standpoint of rivalry between the various papers in your town or country, you might find this to be an excellent scheme for getting ahold of the publicity which you have been trying so hard to put into the papers.

RECORD BREAKING ENTRY LISTS FEATURE OUTDOOR SMALL BORE PROGRAM

Entry lists throughout the various events which made up the small bore program for this year were far ahead of the entries in any previous season and indicate the splendid growth of the .22 caliber game throughout the country.

Old rivals and new contenders were at it, hammer and tongs, in the big event of the program, the N. R. A. Interclub Championship. The Quin-nipiac outfit, by virtue of consistent scoring, nosed out Hillsboro, Ohio and Portland, Oregon by the narrow margin of three points and four points, respectively. With teams of five firing forty shots per man, this is a margin which would have caused considerable holding of breath had the teams been firing shoulder-to-shoulder. All three high teams used the Model 52 Winchester, and Quin-nipiac and Portland shot the 52's own fodder, Precision 200 ammunition. Hillsboro used Remington Palma. As a matter of fact, the first six teams used the Winchester rifle and four of the six used Winchester ammunition, the other two using Remington Palma. Deerfield, which finished seventh, shot Stevens rifle and Peters Tackhole ammunition, while the Remington Arms Club in eighth place shot Remington barrels and Palma ammunition. There were a number of newcomers in this match who gave a splendid account of themselves.

The Bear Rock Rifle Club of Germansville, Pennsylvania, which made its debut but a short time ago, finished thirty-two points behind the winners, and promise an even better showing the next time they have a chance.

The scores follow:

Results of Match No. 1

(N. R. A. Interclub Championship)

Place	Name	Address	Score
1.	Quinnipiac R. & C. Club	New Haven, Conn.	1971
2.	Hillsboro Rifle Club	Hillsboro, Ohio	1968
3.	Portland Rifle Club	Portland, Oregon	1967
4.	Perth Amboy Rifle Club	Perth Amboy, N. J.	1963
5.	Wilmington Rifle Club	Wilmington, Ohio	1963
6.	Pasadena Rifle Club	Pasadena, Calif.	1959
7.	Deerfield Gun Club	Kings Mill, Ohio	1952
8.	Rem. Arms Club	T. Bridgeport, Conn.	1945
9.	Mound City Rifle Club	Webster Groves, Mo.	1945
10.	Ames Faculty Rifle Club	Ames, Iowa	1944
11.	Lakewood R. & Pistol Club	Lakewood, Ohio	1944
12.	Ridgeville Rifle Club	Wilmette, Ill.	1944
13.	Sellwood Rifle Club	Portland, Oregon	1942
14.	Bear Rock Rifle Club	Germansville, Penna.	1939
15.	Tulsa Rifle Club No. 2	Tulsa, Okla.	1935
16.	McCook Field Rifle Club	Darien, Ohio	1935
17.	Mass. Rifle Association	Boston, Mass.	1932
18.	Summit Rifle & Pistol Club	Creston, Penn.	1928
19.	Cleveland Okla. R. C.	Cleveland, Okla.	1921
20.	Spang-Chalfant R. C.	Etna, Penna.	1917
21.	The Swissvale R. & C. Club	Pittsburgh, Pa.	1909
22.	Chicago Rifle Club	Chicago, Illinois	1908
23.	La Jase Rifle Club	La Jase, Penna.	1907
24.	Akron Rifle Club	Akron, Ohio	1904
25.	Santa Barbara R. C.	Santa Barbara, Calif.	1903
26.	Hamilton R. & R. Cl.	No. 2, Chicago, Ill.	1902
27.	Case Eagle Rifle Club	Racine, Wisc.	1901
28.	Hamilton R. & R. Club	No. 1, Chicago, Ill.	1900
29.	Massillon Rifle Club	Massillon, Ohio	1897
30.	New Br R. C. No. 1	New Britain, Conn.	1896
31.	Greenville R. Club	Greenville, Penna.	1892
32.	Oklahoma City R. C.	Oklahoma City, Okla.	1882
33.	Spang-Chalfant R. C. No. 2	Etna, Pa.	1869
34.	Luther Rifle Club	Luther, Okla.	1862
35.	Claremont R. Club	No. 1, Claremont, N. H.	1855
36.	Bell Tel. Rod & Gun Club	Chicago, Ill.	1841
37.	Corbin-Russwin Club	New Britain, Conn.	1832
38.	Louisville Natl. Rifle Club	Louisville, Ky.	1816
39.	Tulsa R. C. No. 1	Tulsa, Okla.	1814
40.	Anchor Rifle Club	Fort Sam Houston, Texas	1803
41.	Nashville Rifle Club	Nashville, Tenn.	1799
42.	Claremont R. Club	No. 2, Claremont, N. H.	1778
43.	Holtwood Rifle Club	Holtwood, Penna.	1773
44.	Solon Springs R. C.	Solon Springs, Wisc.	1774
45.	Spang-Chalfant R. C. No. 3	Etna, Penna.	1726
46.	Claremont R. Club	No. 3, Claremont, N. H.	1719

Not Completed

University of Chicago Rifle Club, Chicago, Ill.
Studebaker Rifle & Revolver Club, Detroit, Mich.
Sugar Grove Rifle Club, Sugar Grove, Penna.

Not Reported

Eau Clair National R. C., Eau Clair, Wis.

The entry list in the Tyro events was very encouraging. The prone match, as was to be expected, attracted the largest list, with an even hundred competitors. The match went to W. R. Amos of Lakewood, Ohio with a perfect score of 200, one point better than A. J. Hersley, of Piqua, Ohio, and two points ahead of J. C. Edwards, Webster Groves, Missouri, and Paul A. Millard, Worthington, Minnesota, who tied at 198.

The three headliners in this match also used Winchester 52's, while Millard fired the Savage 1919. Amos used U. S. N. R. A. ammunition; Yersley, Precision 200; Edwards, Peters Tackhole; and Millard, U. S. N. R. A. This same Millard came back with vengeance in the sitting match and standing match. His score in the sitting match was 199, four points ahead of his nearest competitor, F. W. Shaw, of Lakewood, Ohio, and seven points ahead of Amos. Shaw, like his team mate, Amos, used the Model 52 Winchester with U. S. N. R. A. ammunition. Millard's score of 191 in the standing match gave him a comfortable margin of victory over Floyd D. Gibson, of Iowa City and the omnipresent Amos, both of whom turned in 180. Gibson used a Springfield with U. S. N. R. A. ammunition.

The Springfield, incidentally, showed its worth as a target rifle in these Tyro events, taking eleven of the thirty medals. The Model 52 accounted for fifteen of the decorations and the Savage for four.

The choice of ammunition by the newcomer to the game showed something of a preponderance in favor of U. S. N. R. A., seventeen of the medal winners using this brand. Five of them used Precision 200, six of them Remington Palma, and two of them Peters Tackhole.

The scores of the three Tyro events follow:

Results of Match No. 2

(Prone Tyro Match)

Place	Name	Address	Score
1.	W. R. Amos	Lakewood, Ohio	200
2.	A. J. Yersley	Piqua, Ohio	199
3.	J. C. Edwards	Webster Groves, Mo.	198
4.	Paul A. Millard	Worthington, Minn.	198
5.	Fred N. Anderson	Suffern, New York	197
6.	Harry H. Morrell	New Haven, Conn.	196
7.	Ellis E. Brown	Canby, Oregon	196
8.	Chas. R. Burdette	Baltimore, Maryland	196
9.	Charles E. Lyman, Jr.	Middlefield, Conn.	196
10.	J. W. Taylor	Toledo, Ohio	195
11.	Albert B. Handwerk	Germansville, Penna.	195
12.	J. F. Feuerstein	Castalia, Ohio	195
13.	F. W. Shaw	Lakewood, Ohio	195
14.	C. O. S. Mallard	Columbus, Georgia	195
15.	Harold Flocken	Minneapolis, Minn.	194
16.	J. S. Alban	Massillon, Ohio	194
17.	Luther R. Gambill	Tulsa, Okla.	194
18.	Roswell L. Skeen	Lakewood, Ohio	194
19.	George H. Sittler	Germansville, Pa.	194
20.	William Upton	Newport News, Virginia	194
21.	R. B. Cable, Jr.	Ridgewood, N. J.	194
22.	William C. Piese	Salinas, Calif.	193
23.	Maurice E. Kaiser	Sacramento, Calif.	193
24.	Harold E. Stassen	St. Paul, Minn.	193
25.	Frederick C. Carter	Rochester, N. Y.	193
26.	M. C. Engel	Luther, Okla.	193
27.	Floyd Oswald	Germansville, Penna.	193
28.	C. Schaefer	Castalia, Ohio	192
29.	Ralph Mosteller	Columbus, Georgia	192
30.	Jesse O. Norcross	Worcester, Mass.	192
31.	Hubert H. Renshaw	Kamiah, Idaho	192
32.	Clinton D. Fetherhoff	Germansville, Penna.	192
33.	John S. Urray	Santa Barbara, Calif.	192
34.	Dr. M. E. McManes	Piqua, Ohio	192
35.	A. Dibblee Poett	Santa Barbara, Calif.	192
36.	Richard L. Clark	Santa Barbara, Calif.	192
37.	Ralph R. Haines	East Akron, Ohio	192
38.	F. Stover	St. Louis, Missouri	192
39.	E. Hunter Coleman	New Orleans, La.	192
40.	Earl Handwerk	Germansville, Penna.	191
41.	Paul G. Peter	Germansville, Penna.	191
42.	Elmer E. Davis	Toledo, Ohio	191
43.	Harry E. Boughton	Lakewood, Ohio	190
44.	Andrew Skolas	Eau Claire, Wisc.	190
45.	L. O. Moore	New Cumberland, Ohio	190
46.	D. Stanley Armistead	Attica, Ohio	190
47.	Edgar E. Hamm	Germansville, Penna.	189
48.	Otto E. Kramer	Santa Barbara, Calif.	189
49.	Floyd D. Gibson	Iowa City, Iowa	189
50.	Herbert R. Brunton	Malden, Mass.	189
51.	J. F. Woolshlager	Castorland, N. Y.	189
52.	Charles E. Greenfield	Santa Barbara, Calif.	189
53.	C. C. Berkeley	Newport News, Virginia	189

54.	Oscar Wold	Eau Claire, Wisc.	188
55.	Frank D. Wheller	Chicago, Ill.	188
56.	Chris Laursen	Eau Claire, Wisc.	188
57.	A. B. Sprague	Worcester, Mass.	188
58.	Charles German	Germansville, Penna.	187
59.	Theodore M. Hastings	Santa Barbara, Calif.	187
60.	O. N. Fisher	Eau Claire, Wisc.	187
61.	E. B. Huffman	Columbus, Georgia	187
62.	Chester A. Moore	Sommerville, Mass.	186
63.	Wilbur Brunthaver	Fremont, Ohio	186
64.	G. W. Lewallen	Columbus, Georgia	186
65.	LeRoy Rusth	Pasadena, Calif.	185
66.	Willie E. Weiss	Germansville, Penna.	185
67.	James C. Carter	Santa Barbara, Calif.	185
68.	Lester H. Greene	Forestville, Conn.	184
69.	Raymond J. Roland	Rochester, N. Y.	183
70.	C. E. Tisch	Massillon, Ohio	181
71.	E. A. Craven	Selma, Calif.	180
72.	E. S. Arthur	Luther, Okla.	180
73.	J. W. Woolshlager Jr.	Castorland, N. Y.	180
74.	M. E. Comp	Massillon, Ohio	179
75.	Jens K. Jensen	Albany, N. Y.	179
76.	W. M. Hire	Castalia, Ohio	177
77.	R. B. Creig	Oak Park, Ill.	177
78.	Extra S. Carpenter	Owls Head, N. Y.	176
79.	William A. Elcock	Newport News, Virginia	176
80.	John D. Curran	Santa Barbara, Calif.	174
81.	H. R. Maxfield	New Hartford, Conn.	173
82.	W. H. Thomas	Santa Barbara, Calif.	169
83.	Frederick B. Berger	Santa Barbara, Calif.	161
84.	Ellis E. W. Given	Philadelphia, Penna.	134

Not Reported

Luther S. Moore, Newtonville, Mass.
John D. Freeman, Tulsa, Okla.
Earl A. Lycke, Ione, Calif.
G. A. Raab, Portland, Oregon
James W. St. Clair, Ft. Benning, Ga.
Harry B. Wells, St. Louis, Mo.
Chas. W. Russell, Newport News, Va.
Edw. A. DeAngelo, Toledo, Ohio.
Douglas R. Nichols, West Orange, N. J.
Ole Rarstad, Eau Claire, Wis.
Clarence A. Miller, Franklin, Pa.
F. L. Murray, Santa Barbara, Calif.
E. I. Cornbrooks, Newport News, Va.
Frank H. Bulander, Schenectady, N. Y.
H. S. Griggs, Jr., Santa Barbara, Calif.
Henry P. Stamer, Toledo, Ohio.

Results of Match No. 3

(Sitting or Kneeling Tyro Match)

Place	Name	Address	Score
1.	Paul A. Millard	Worthington, Minnesota	199
2.	F. W. Shaw	Lakewood, Ohio	195
3.	W. R. Amos	Lakewood, Ohio	192
4.	G. W. Lewallen	Columbus, Georgia	192
5.	Luther R. Gambill	Tulsa, Oklahoma	192
6.	Lester H. Greene	Forestville, Conn.	189
7.	William Upton	Newport News, Va.	189
8.	J. T. Feuerstein	Castalia, Ohio	187
9.	F. Stover	St. Louis, Mo.	186
10.	W. N. Hire	Castalia, Ohio	186
11.	Charles E. Lyman, Jr.	Middlefield, Conn.	185
12.	H. F. Winkie	Santa Barbara, Calif.	185
13.	Harry E. Boughton	Lakewood, Ohio	185
14.	Otto E. Kramer	Santa Barbara, Calif.	185
15.	Huber H. Renshaw	Kamiah, Idaho	185
16.	Chas. Burdette	Baltimore, Md.	185
17.	C. C. Berkeley	Newport News, Va.	184
18.	C. Schaefer	Castalia, Ohio	184
19.	A. B. Sprague	Worcester, Mass.	183
20.	G. W. Lewallen	Columbus, Georgia	182
21.	J. C. Edwards	Webster Groves, Mo.	182
22.	Floyd D. Gibson	Iowa City, Iowa	181
23.	Roswell L. Skeen	Lakewood, Ohio	181
24.	William A. Elcock	Newport News, Va.	180
25.	J. S. Alban	Massillon, Ohio	179
26.	M. C. Engel	Luther, Okla.	178
27.	E. A. Craven	Selma, Calif.	178
28.	Chester A. Moore	Somerville, Mass.	177
29.	Ralph R. Haines	East Akron, Ohio	175
30.	Elmer E. Davis	Toledo Ohio	173
31.	Herbert R. Brunton	Malden, Mass.	172
32.	E. S. Arthur	Luther, Okla.	168
33.	John H. Laug	Piqua, Ohio	165
34.	C. E. Tisch	Massillon, Ohio	160
35.	Sylvester E. Worley	Pasadena, Calif.	160
36.	Jesse O. Norcross	Worcester, Mass.	157
37.	Jens K. Jensen	Albany, N. Y.	151
38.	M. E. Comp	Massillon, Ohio	142
39.	Charles McCarthy	Fort Sam Houston, Texas	139

Results of Match No. 4

(Standing Tyro Match)

Place	Name	Address	Score
1.	Paul A. Millard	Worthington, Minn.	191
2.	Floyd D. Gibson	Iowa City, Iowa	189
3.	W. R. Amos	Lakewood, Ohio	189
4.	George Sheldon	Voluntown, Conn.	174
5.	W. H. Thomas	Santa Barbara, Calif.	173
6.	G. W. Lewallen	Columbus, Ga.	171
7.	Harry E. Boughton	Lakewood, Ohio	170
8.	Charles E. Lyman, Jr.	Middlefield, Conn.	169
9.	Hubert H. Renshaw	Kamiah, Idaho	168
10.	F. W. Shaw	Lakewood, Ohio	167
11.	Luther R. Gambill	Tulsa, Okla.	165
12.	Ralph Mosteller	Columbus, Ga.	165
13.	J. C. Edwards	Webster Grooves, Mo.	163
14.	M. C. Engel	Luther, Okla.	157
15.	Sylvester E. Worley	Pasadena, Calif.	156
16.	E. S. Arthur	Luther, Okla.	153
17.	Chas. R. Burdette	Baltimore, Md.	150
18.	E. M. Farris	Crestline, Ohio	147
19.	C. C. Berkeley	Newport News, Va.	145
20.	Jesse O. Norcross	Worcester, Mass.	136
21.	J. W. Taylor	Toledo, Ohio	132
22.	Ellis E. W. Given	Philadelphia, Pa.	122
23.	William Upton	Newport News, Va.	130
24.	Chester A. Moore	Somerville, Mass.	125
25.	William A. Elcock	Newport News, Va.	123
26.	Clarence H. Collins	Fort Sam Houston, Tex.	122
27.	M. E. Comp	Massillon, Ohio	117

WASHINGTON STATE RIFLE ASSOCIATION LEAGUE RESULTS

The annual league competitions of the Washington State Rifle Association have been concluded with the result that Seattle takes the Class A and State championship and the five gilt medals which go with the title. Everett tops the B class and gets five silver medals. Wenatchee is the winner in class C and has been awarded five bronze medals. The State individual championship goes to L. V. Stoddard, of Everett, with a score of 1389. Eugene Hicker, of Seattle, was runner-up with 1357. These nimrods will sport gold and silver medals respectively before the envious eyes of their club members from this time forth.

Some indications of the dangers of being in government employ or an I. W. W. in this particular State may be gained by the more law abiding riflemen of the rest of the country from the following paragraph quoted verbatim from the official bulletin covering the events:

Team and individual medals will be sent by registered mail to the secretaries of the winning clubs, who are charged with their safe and appropriate delivery to the proper individual. All medals will leave this office on July 7th under the present award. This is being published with the hope that after reading, medal winners will know what to expect and not try to kill off every mail carrier who falls short of his expectations.

We are further advised that,—

As a "concession" to the female of the species the proposed shoot for July 5th at Camp Lewis has been postponed until approximately the same time in August. The majority of the club secretaries report that their efforts to assemble the clan for *der tag* brought nothing but alibis from the lord and master and hostilities from the gentler sex. The temptation of a three-day vacation offered by July 4, 5, and 6 caused many to fall by the wayside.

Conditions for the shoot remain unchanged. The date contemplated is August 3rd. Put in your say now. Can you be here on August 3rd?

SHOULDER-TO-SHOULDER MATCH IN CALIFORNIA

The Hammonton and Oroville, California, Clubs staged a shoulder-to-shoulder match over the Hammonton range on June 22nd. Teams of ten represented each club, five shots in each of the four positions at 200 yards. Hammonton hung up a team total of 816 against 775 for the visitors. A return match has been arranged on the Oroville range, and a match is in prospect between Hammonton and Gridley. Any clubs in that section of California desiring to arrange competitions should get in touch with Mr. C. G. Dutton, executive officer, Hammonton Rifle Club, Hammonton, California.

OFF-HAND MATCH AT CRESSON, PA.

The Summit Rifle Club, of Cresson, Penna., a town of five thousand inhabitants, is conducting a weekly off-hand competition which has an average entry list of forty-one competitors. This is an entry list which many clubs in larger cities will view with envy. The competition is conducted on a handicap and class basis, which probably helps the attendance considerably. Competitors are divided into four classes under the Lewis Class System, after being handicapped on a sliding scale. For the past two weeks, H. G. Olson, secretary of the club and a candidate for this year's International Team, has lead the field on points actually scored, but is carrying a heavy handicap which has resulted in first prize going to one of the other members of the club. Nine of the forty-one competitors are women, and to their credit, be it said that they are not all finishing among the "also rans."

THE DUPONT TROPHY

The du Pont Trophy was presented to the National Rifle Association in 1923 by E. I. du Pont de Nemours & Co., for annual competition with the .30 caliber rifle. A new match, the N. R. A. "Free Rifle" Championship was programmed and the du Pont Trophy assigned to the new competition.

The trophy is a splendid bronze representing the French archer—the marksman who might be considered as the forefather of the "stand up on your hind legs and shoot" clan. It was modeled and cast in France and considerable interest attended the unpacking of the bronze from its massive import packing case when it arrived at Camp Perry last year.



Gunnery Sergeant Morris Fisher, U. S. M. C., the International Title holder proved his right to the title by outshooting a field of ninety-nine "free rifle" sharks in the initial competition and the trophy now decorates the office of the Commandant of the Marine Corps.

Although the youngest of the major trophies at Perry, "The Archer," because of the excellent craftsmanship and intrinsic value represented, has already established itself as one of the headliners. It is serving a most valuable function in giving the "free rifle" men something to shoot for that is really worth while. As a matter of fact the du Pont Trophy probably represents the greatest "hard cash" value of any individual rifle trophy in competition in the United States.

The "N. R. A. Free Rifle Championship" will be fired Friday afternoon, September 19th and all day Saturday the 20th. The course of fire calls for 20 shots in each of the three international positions, standing, kneeling, and prone; range 300 meters. No limitations on weight of rifle, trigger pull or sights except that the sights must be without glass.

TEXAS STATE RIFLE ASSOCIATION MATCHES

The matches of the Texas State Rifle Association were staged June 25th to 28th on the range at Camp Mabrey. The matches got under way with ideal weather conditions, and with more than two thousand dollars in trophies and medals to be distributed.

The 200-yard off-hand match was won by Mr. John Allen with a score of 45. The 300-yard prone competition went to B. T. Thompson on a score of 50 plus four bull's-eyes. The 500-yard prone slow fire event was won by Joe Rowe, with a possible score plus one bull's-eye. The students' match fired at 200, 300 and 500 yards, was won by R. Martinez on a total of 143. The 600-yard event went to a triple tie between Captain Whitley of the Texas National Guard, Marvin Kreuz, of Austin, and W. H. Spencer—all with 96. Captain Whitley won the match on a toss-up. The second event at 600 yards was won by Lieutenant Lucy of the Texas National Guard with a score of 48. Mr. Tom Armstrong, of Austin, also registered a 48 but was outranked. The 1,000-yard event went to Maj. Claude A. Adams, who is well known to the Regulars at Camp Perry as team captain and coach of various Texas teams for the past nine matches. Major Adams won the event with a score of 45.

The match calling for ten shots off-hand, five shots sitting, and five shots kneeling at 200 yards for the Topperwein Trophy, was won by Mr. Henry Wiere on a score of 92. The Austin Rifle Club Trophy was won by Captain Whitley with a score of 99, but we are unable to tell you at what range or under what conditions this match was fired.

The Texas State Rifle Association championship, fired on the third day of the competitions, went to J. C. Talcott, an eighteen-year-old rifleman from San Antonio. Talcott had shot consistently throughout the matches, and when the medals and trophies were checked up, he had seven medals and two trophies. It is to be hoped that some public spirited organization in San Antonio may be able to find the funds to send this youngster to Camp Perry as the guest of the city of San Antonio.

Major C. M. Crawford, Assistant Adjutant General of Texas and one of the most active boosters of the game in this country, received his reward when he won the Steves Trophy Match for the third consecutive time with a score of 94. This match called for twenty shots at 1,000 yards.

The McNeal Trophy Match went to Tom Armstrong with a score of 95 for ten shots at 500 and ten shots at 600 yards. The Austin Kiwanis Club Trophy was won by Sgt. Fred L. Gassman, Texas National Guard, with 98, ten shots at 200 and ten shots at 300 yards rapid fire. The Civilian Club Team Match went to Austin with a team total of 512.

Following the rifle competitions, the pistol matches were held, the Texas State championship going to L. L. Cline, of San Antonio, with a score of 536 x 600. The all-around championship with rifle and pistol went to Sergeant Reid, who also hails from the city of the Alamo. The 50-yard slow fire pistol match was added to Cline's string with a total of 95 x 100. The timed fire match at 25 yards and the rapid fire match both went

to W. H. Spencer, the first event with a score of 97, and the second with a score of 93.

Following the competitions the San Antonio visitors announced an open day on their range for July 6th, and invited all comers to look over the municipal shooting plant which the San Antonio riflemen installed some time ago at Breckenridge Park. We have received no information as to how this house warming party came out.

* * *

SOUTHERN CALIFORNIA LEAGUE STAGES ALL-AROUND COMPETITION

Sunday, June 15th, was a big day on the range at Riverside, California, when the Southern California League held a series of matches from 1,000 yards with the service rifle, down to 25 yards with the pistol. E. H. Henderson, who has had his name in the paper more or less frequently since his performance at Camp Perry last year, won the 1,000-yard competition with a possible score of 50, using the Springfield as issued with the addition of a Lyman No. 48 sight. Sargent captured the 600-yard event with a score of 48; Elliott took the 200-yard rapid fire on 36; Taylor, the 200-yard small bore with 91; and Kelly, the 25-yard pistol match with 167. This same Kelly captured the grand aggregate with a total for the five events of 365.

Incidentally, the official bulletin covering the match contains the following paragraph, which will be of interest to clubs affiliated with the Southern California League:

Club secretaries are hereby notified that League dues for 1924, in amount of five dollars, are due and payable *right now*.

F. K. Elliott, 155 North Main Street, Los Angeles, is secretary of the Southern California League.

* * *

CIVILIANS AND GUARDSMEN IN FLORIDA MATCH

The Jacksonville Rifle Club fired their annual challenge match with the Florida National Guard on the range at Camp Johnston, Black Point, Florida, on Sunday, July 20th. Despite their showing in the Taliaferro Cup Match during the State competitions, the civilians had to take the Guardsmen's dust in the challenge competition.

The course of fire was ten shots standing at 200 yards and fifteen shots prone at 300 yards. Nine men fired on each team, five high scores being considered for record. At the conclusion of the offhand stage, things were tied, and at 300 yards, the Guardsmen pulled out ahead and finished with a team total of 557 against 535 for the Jacksonville civilians. In the five years that this challenge match has been fired, the civilians have won three times and the Guardsmen twice.

Incidentally, the Jacksonville Club is planning on putting its entire membership over the full instruction course A, in order to develop material for new teams, as well as to qualify as many as possible over the Regular Army Course this year.

* * *

HAVE A MATCH

The McKean County Rifle Club, F. D. Hickok, Match Officer, No. 152 Summer Street, Bradford, Pennsylvania, desires matches with other rifle clubs on the indoor range at 75 feet, using telescope sights. They are willing to shoot in any position, or in all positions.



INTRODUCING THE NEW DIRECTOR

Lieutenant Colonel George C. Shaw has been selected to be the Director of Civilian Marksman, succeeding Colonel C. E. Stodter, who was relieved on May 28th and ordered to other duty.

Colonel Shaw began rifle shooting in the Engineer Corps of the D. C. N. G. in the year 1890. He was taught to shoot by such old masters as



S. I. Scott, James E. Bell, F. L. Graham, Andrew Hutterly, George Harries, and James Pollard, who, among American riflemen, may be termed as the "Grand old men" of this particular sport.

In 1894 Colonel Shaw became Inspector of Rifle Practice of the 5th Battalion, D. C. N. G., and in 1897 of the Second Regiment, D. C. N. G. At the time of the Spanish American War in 1898, Colonel Shaw was 1st Lieutenant of the 1st D. C. Infantry. He was afterwards honorably mustered out, and then became a private in the 27th U. S. Volunteer Infantry. He was commissioned 2nd Lieutenant and 1st Lieutenant of the same Regiment, and in 1901 became 2nd Lieutenant of the Regular Army. In 1902 and 1903 he took part in campaigns against the Moros in the Philippines, and was awarded the Congressional medal of honor in 1904 for gallantry in action in May, 1903, and a silver citation star for gallantry in action in April, 1903.

As a member of the Infantry Team in the years 1904, 1905, 1906, 1907, and 1908, and as Team Captain in 1909, 1910, and 1911, Colonel

Shaw had an important part in the winning of the National Trophy for his branch of the Service three times. He was a shooting member of the U. S. Palma Team in 1901, Adjutant of the National Matches in 1916, Coach of the American Expeditionary Force Rifle Team in 1919, and Captain of the U. S. Olympic Rifle Team in 1920.

From the foregoing record it can be easily understood that Colonel Shaw brings a wealth of experience to aid him in the administration of his new duties. He has the advantage of having the view point of the civilian, the National Guardsman, and the Regular Service regarding rifle marksmanship. Without doubt Colonel Shaw not only will carry on the splendid work of the former Director, but he will increase the usefulness of his office.

NOTICE

As the Director of Civilian Marksman and several members of his office force will be on duty at Camp Perry, Ohio, at the time of the National Matches, all sales will be suspended from August 30th to October 3rd.

CHANGE IN PRICES

The U. S. rifle, caliber .30, Model 1903, star gauged and specially selected for the National Matches, fitted with model 1922 pistol grip stock with military fore end, listed in latest price list at \$40.44 has been advanced in price, to \$45.50, plus a packing charge of \$1.34, making a total of \$46.84.

The price of the pistol grip stock, model 1922, sporting type for .30-caliber rifle with or without rear sight base is \$7.61, instead of \$6.63, as quoted in price list.

Revolver ball cartridges, cal. .38, are packed in cases of 3,000 instead of 2,000 and the price is \$30 a case, instead of \$20, as quoted in price list.

The entire supply of bullets, cal. .30, 170-grain, flat base, gilding metal jacket, listed in price list at \$9 a thousand has become exhausted. There will be no more of these bullets available for sale.

"HANDBOOK OF THE U. S. RIFLE, CALIBER .30, MODEL 1903"

Several weeks ago one of the sporting magazines published an article in which it was stated that the "Handbook of the U. S. Rifle, Caliber .30, Model 1903" could be secured through this office. Several requests were received which were returned to writers in view of the fact that the supply of these pamphlets in this office had become exhausted. A new supply of these pamphlets has been received in this office and may be secured at the cost of five cents each. In sending in request please refer to the pamphlet as the "Handbook of the U. S. Rifle, Caliber .30, Model 1903" in order that no mistake will be made in mailing this publication.

THE DOPE BAG



A FREE SERVICE TO TARGET, BIG GAME AND FIELD SHOTS ALL QUESTIONS BEING ANSWERED DIRECTLY BY MAIL

Rifles and Big Game Hunting: Major Townsend Whelen Pistols and Revolvers: Major J. S. Hatcher
Shotgun and Field Shooting: Capt. Charles Askins

Every care is used in collecting data for questions submitted, but no responsibility is assumed for any accidents which may occur.

THE UPSET OF BULLETS

AM just finishing a restocking job on my Springfield and when done, expect to have an all-around hunting piece second to none. Removed the rear sight base, smoothed down the barrel in a lathe and shrunk a band near the receiver into which I shall dove-tail a Lyman folding rear sight. The line of sight was made somewhat lower than on the service arm.

If convenient, I would like your opinion on a few problems I have:

First, I notice in a recent article in *Recreation* by Captain Crossman in which he states that the .30-06 150-grain, soft nose spitzer bullet upsets in the barrel from the force of the explosion and is no longer pointed when it leaves the barrel. Is it not strange that if this is the case, it would have affected the ballistics and been noticed before? I had counted on using this cartridge on deer, thinking it would spoil less meat than any other I could use. What would you recommend as a substitute for the above bullet if you think necessary. That is, in "boughten" ammunition?

Second, Considerable experience has shown me that the .22 cartridge is not suitable for small game. I have had too many grouse get away, shot through the body to die later and believe it's a crime to use the .22 for this purpose.

I have an idea I could convert a single shot .22 rifle into a very satisfactory pistol to use the .25 Stevens cartridge. Have been informed that some certain ammunition company has recently put out a cartridge in the .25 Stevens which is a great improvement over the past product. Could you tell me what company this was? Also any suggestions as to chambering for improved accuracy would be appreciated. I had thought of getting a piece of barrel of the same groove diameter as the .25 Stevens such as the .25-35 or .250-3000 and chambering it for the .25 Stevens. Now these barrels have different twists from 1 in 10 to 1 in 16 inches. Would either be suitable for my purpose?

Do you think I could persuade Stevens to bore and chamber a ten-inch barrel. What would it cost approximately, since they already have the tools? O. A. J., Chicago, Ill.

Answer (by Major Whelen). A soft point bullet with a thin, pointed lead point does set back as to the point when fired at high breech pressure. That is, the point flows back over the jacket and the bullet becomes virtually a round point. This was noticed on firing the .30 Newton soft point, and .250-3000 Savage (87-grain) bullets into snow. But this mutilation of the point would make practically no difference in the trajectory up to 300 yards at least, and precious little difference in accuracy either. Therefore, it would not be noticed, and as a matter of fact you can see that it makes practically no difference from a hunting standpoint.

If I remember correctly the Ordnance Department once fired both 170-grain pointed and 170-grain round nose bullets at the same time, and it was found that the shortest range at which any difference in the angle of elevation was noticed was 500 yards.

I doubt if the protected point, bronze point, or open point bullets, even of 150 grains, set back in this way.

I have read a lot about the .22-caliber cartridges being ineffective on grouse, but I guess I have shot well over 200 grouse with this cartridge (always the Lesmoke, never the smokeless with its hard bullet) and have never had a single failure when the bird has been well hit. However, the Stevens .25 rim fire is a better cartridge except that it makes more noise. The cartridge referred to by Doctor Miller as being very accurate is the Remington Lesmok.

I doubt if the Stevens Company would rebore a rifle for you, although there is no harm in asking them. You see this company is organized to produce a strictly machine made line of goods, all exactly the same, and it disorganizes the works like the devil, and costs like sin to convert things around for a special job. It's different now from the old days when factories were not arranged on lines of scientific management and quantity production at the lowest cost.

Have you ever thought of using the S & W ten-inch barrel pistol, with skeleton stock like the Stevens Diamond Model pistol, stock dovetailing into a block screwed to end of grip, Lyman type of rear sight and ivory bead front sight? Whole outfit, stock included, will go on a holster on the belt or in the rucksack. Makes a fine grouse outfit, and it can easily be taken along when the big rifle is carried.

THE .41 COLT

WHY is it that you never hear anything about the .41 Colt?

Could a .32 or .38 Colt single action Army revolver be rebored into that (.41-) caliber?

Do you suppose Colt will ever make the old single action with swing out cylinder? G. C. W., Riverton, Oregon.

Answer (by Major Hatcher). The reason why you do not hear much about the .41 Colt is that it is in between the .38 and the .44 calibers, both of which are more powerful than it is, and therefore more popular, so that most of the talking is done about either of these two popular sizes, instead of the .41.

You can buy the Colt Army Special chambered for the .41 Colt.

It would be possible to fit up a .32-20, or .38-40 to shoot the .41. The barrel size of the .38-40 would take the .41 without change, but a new cylinder would have to be made. This would be a very expensive operation if done at the factory, and would not be worth the money involved.

It is possible you could find a gunsmith who would be willing to undertake the job, but I think it would be more satisfactory to purchase the Colt Army Special already chambered for this caliber.

I very much doubt if Colt will ever change the old single action to a swing out cylinder, as it would involve quite a cost in new tools and fixtures, and most of the trade is now done in the most modern arms, so that it would not justify the expense that the company would have to go to.

VERTICAL FLIGHT OF BULLETS

DOES a rifle bullet, fired vertically into the air, have the same energy on falling to earth, as it does on leaving the muzzle of the rifle? That is would the energy at the moment of the bullet's reaching the earth be the same?

If not, is there any positive proof to the contrary, and were there ever any tests, practical tests, I mean, taken that proved the energy is not the same?

If there were, could you give me the approximate time and place and what is the reason for the falling off in energy if any. Do the rifling grooves in the barrel have any tendency to cut down or eliminate the lateral deviation of the bullet? It is my idea that the rifling twists were to keep the bullet flying point first, and to keep it from key holing, or turning end over end. Am I correct?

What is the drift at 500 yards of the .30 caliber service bullet?

Will the .22 long rifle cartridge shoot as accurate at 200 yards as the service rifle, that is the "as issued" Springfield with service ammunition, that is under conditions favorable to the .22? C. M. M., St. Paul, Minnesota.

Answer (by Major Whelen). A bullet fired vertically into the air does not have the same velocity on falling to the earth that it did when it left the muzzle of the rifle, or anything like it. The bullet starts to descend with no remaining velocity, and the only velocity it acquires is that due to the acceleration of gravity. But in falling it also encounters the resistance of the air. As the acceleration due to gravity increases, so also does the resistance of the air. Finally there is a balance between these two forces, so that the bullet falls to earth with velocity sufficient only to dent a plank. The proof is found in experiments in vertical firing at the Small Arms Ballistic Station of the Ordnance Department, Daytona, Florida, 1918-1920, and was fully described in the May 1 and May 15, 1923, issues of *THE AMERICAN RIFLEMAN*. These issues are all exhausted.

The object of the rifling is to cause the bullet to fly point to the front, and to make its flight more accurate. Drift is merely a phenomena of rotating projectiles. The drift of the .30 caliber Model 1906 cartridge at 500 yards is 2.64 inch as determined by the simultaneous firing of two rifles, one with a right hand twist, and the other with a left hand twist.

The .22 Long Rifle cartridge is not quite as accurate at 200 yards as the Springfield rifle, both being fired with the best ammunition. I think the average difference in group diameters would be about one inch.

"LONG COLTS" IN THE SPECIAL

SEVERAL of our members are interested to know if there is any danger to shooter who is using "revolver ctgs. cal. 38 (.38 Long Colt)" in a revolver bored for .38 S. & W. special cartridge. I. D. B., Trenton, N. J.

Answer (by Major Hatcher). There is no danger at all in shooting the .38 long Colt cartridge in revolvers chambered for the .38 Smith & Wesson. The reason that these .38 long Colt cartridges are not recommended is merely because they are not as accurate as the .38 special.

I have used thousands of them in my .38 Special revolver with the greatest satisfaction, as the slight decrease in accuracy is not noticeable at ranges less than fifty yards, and the difference in price is great enough to make them highly desirable for practice use.

RIFLE THROATING AND ACCURACY

I UNDERSTAND that extreme accuracy in the Krag can only be had by using a round-pointed 220-grain bullet. So I had intended using a bullet of that type with Lubaloy jacket. I want to use these reloads for woodchuck shooting at 200 to 300 yards. As you well know, this work requires extreme accuracy, and a flat trajectory is highly desirable. I am living in a very thickly settled farming community and would have to restrict the use of these loads to a very few safe shots at long range and into the side of a rather abrupt slope. However we have a few of that kind of shots. I would like to use powder and primers supplied by the Director of Civilian Marksmanship. This powder is listed in my price list as Pyro .30 cal. D. G.

What load would you suggest? How much variation in weight of powder charge would be permissible? L. O'H., New Castle, Ind.

Answer (by Major Whelen). All modern American rifles have the rifling just in front of the chamber cut so as to just exactly conform to the ogive (curve of the point) of the bullet intended to be used in the rifle. This part where the bullet fits is called the throat or lead. The throat straightens the bullet and cartridge up in the chamber, and makes the axis of the bullet conform more nearly to the axis of the bore and, other things being equal, one gets superior accuracy. If, however, in that rifle, you use a bullet with a shorter point, or seat the bullet deeper into the case, it is more or less loose in the chamber. Being loose in the chamber it will naturally either lie in the bottom of the chamber, or in some position in the chamber to which it has been pushed by either the breech bolt or by pressure of the extractor on the head of the case. Thus usually it will not lie with its axis in line with the axis of the bore, and it enters the bore in a tipping position. The pressure of the gases expands the bullet to a certain extent so that it takes the grooves completely, but the bullet is slightly deformed, and its center of form and center of gravity do not coincide when it issues from the bore. Of course while in the bore it must rotate around its center of form, but as soon as it leaves the bore it then rotates around its center of gravity, and as a result it travels in a gradually increasing spiral through the air. Practically speaking, a bullet deformed in this way will shoot into a circle from one to four inches larger at 100 yards than an undeformed bullet. Four inches is an extreme case. Probably in the Krag the group would not be enlarged more than two inches.

Now the Krag rifle is throated for the 220-grain old Krag bullet which had a very long point, and consequently the throat is very long. Bullets made for the 30-06 cartridge usually do not fit up into the throat if they are loaded deeply enough in the Krag case so that the resulting cartridge will work through the magazine of the Krag rifle. Consequently such bullets are usually very slightly deformed by tipping in the chamber and by jumping through the long Krag throat, and they give from one to two inches larger groups at 100 yards (and proportionately at other ranges) to what ammunition properly fitted to the Krag rifle usually can be relied on to give.

There is one way to correct this. This is to load the bullets projecting further out of the Krag case so that they do fit up into the Krag throat, and do come into contact with the start of the rifling when loaded into the chamber. Almost all the 30-06 bullets can be so loaded in Krag cases, but usually the resulting cartridge will not work through the magazine, but this fault is of no moment for target shooting or woodchuck shooting. However, you cannot load this way with the 150-grain 30-06 bullet, as this bullet is so short that it cannot be loaded far enough out of the case to come in contact with the throat.

Now as regards to the 220-grain bullets. The old 220-grain bullets were all right in the Krag. But practically all 220-grain bullets, including the 220-grain Lubaloy, are now made with a modified ogive to fit the throat of the Springfield rifle, and when loaded in Krag cartridges they

do not fit the throat any more than do the other bullets for the Springfield.

If you want to get the very best accuracy in your Krag I would advise that you load the 220-grain Lubaloy, or any other 220-, 180-, or 170-grain bullet you wish, far enough out of the case to fit well up into the throat. Find out how much the bullet should project by experimenting in your rifle. The loaded cartridge should not go completely home when shoved into the chamber with the fingers by about one-twentieth inch. Then when you close the bolt on this cartridge the bolt will push the bullet right up into the throat. In this way you should get fine accuracy.

For shooting in a settled community, use any soft point or expanding bullet of 220, 180, or 170 grains weight, which is not nearly so liable to glance from the ground as full jacketed bullets.

With the Pyro D. G. powder sold by the Government use 36 grains weight with 220-grain bullets, 37 grains with 180 bullets, or 38 grains with 170-grain bullets. This powder should do excellent work in these charges.

THE .256 GIBBS MAGNUM

IN READING Part I of your article in THE AMERICAN RIFLEMAN "Analysis of Game Bullets," I noticed that you mentioned a 6.5 magnum cartridge made by Gibbs, England, which fired a 140-grain bullet at about 300 f. s. Will you kindly give me a little detailed information regarding this cartridge?

What kind of a bullet has it? Is the breech pressure excessive? Where can it be obtained in this country, and at what price? Is it necessary to alter the regular 6.5 Mannlicher-Schoenauer in any way to handle it? If so, to what extent?

My Mannlicher is a pre-war gun, purchased from Mr. Wm. Krippner, New York, is in absolutely new condition; barrel length is 22¾ inches. It has proved to be very accurate with both the 160-grain U. S. bullet and the 140-grain Western. All the ammunition was hand loaded as that is the only kind I have used in it so far.

I would like to try this Gibbs magnum cartridge if the rifle will handle it.

Why is there only 80 f. s. difference in eight inches of barrel length on the Krag and twenty-five feet per inch on other rifles? W. C. G., Sacramento, Calif.

Answer (by Major Whelen). George Gibbs, rifle maker, of Bristol, England, makes a .256 Mannlicher-Schoenauer rifle for a special .256 Magnum cartridge of his own design. The cartridge uses a 140-grain bullet and the muzzle velocity in a 26-inch barrel is about 3,000 foot seconds. I have not personally tried this cartridge. I understand that the regular Mannlicher-Schoenauer cartridge is used in this rifle and that Mr. Gibbs has at times advertised that he would take a 6.5 mm. Mannlicher-Schoenauer rifle and rechamber it to use this .256 Magnum cartridge, for five pounds although you had better verify this as my information is hearsay.

As this cartridge is undoubtedly loaded with cordite powder, I imagine that the breech pressure is quite low, the bullet is probably jacketed with cupro nickel, and has some kind of a soft point. I would expect rather excessive metal fouling. Probably Abercrombie & Fitch, of New York, could import this ammunition for you.

The difference in muzzle velocity between the 30-inch barrel rifle and 22-inch barrel grooving of the Krag is 80 foot seconds, when the regular service ammunition loaded with about 35 grains of W. A. Powder and 220-grain bullet is used. With the Springfield rifle an alteration of one inch in barrel length gives approximately 25 foot seconds difference in velocity, when the regular service cartridge with 150-grain bullet and a charge of Pyro D. G. Powder is used. With all other rifles, powder, and bullets, there will be variations from this and it will be practically impossible to collect these variations in advance, but we have been assuming that the difference is about 25 foot seconds per inch. Probably the reason we get only 80 foot seconds for eight inches in the Krag is because with the ammunition

used the powder practically all burns in the first twenty-two inches of barrel and the other eight inches length of the rifle gives very little increased velocity.

LONG BARRELS FOR THE .45 AUTO.

HAVE for a number of years been watching if anyone would be bringing up the question of having the barrel of the .45 Colt Auto. lengthened a little, say about to seven inches, and realize that the way the pistol is made that it is probably just what the arm should be for Army use, nevertheless, inasmuch as one knows that the longer a projectile is guided in a rifled tube, approaching the length of maximum efficiency, the more accurate the same should fly; furthermore it would appear that a little better velocity could be attained.

I understand that some company has been putting out a ten-inch barrel, but have never heard much about it, neither have I ever been able to obtain a description of same. Would consider an eight-inch barrel the maximum length for practical purposes and probably a seven-inch better and handier for all around use, i. e. speaking of a long barreled pistol.

Some time ago I took this up with the Colt people, but their reply was that they never had such an inquiry, neither did they expect that said pistol would be put out with a longer barrel. Considering the satisfaction which said arm is giving in the Army and to the sportsman, it almost looks as if there should be enough demand for one of above description. Whatever experiments which may have been made by the Ordnance Department along this line, like to say that I am not at all familiar with the same.

Comparing the .45 automatic with a Bisely or new Service model revolver, even two inches added to barrel and receiver would make the same considerably shorter than the above mentioned with seven and one-half inch barrels. With thanks in advance. F. C. S., Williamsburg, Ia.

Answer (by Major Hatcher). There is no doubt that a reasonable increase in velocity with the automatic pistol could be obtained by lengthening the barrel, but I believe that no increase in accuracy would be likely to result unless the sight radius were increased.

If a bullet starts in a given direction, it will continue in that direction unless something happens to change its course. Therefore, if it is guided towards the target for a distance of five inches, it will continue in the same line as well as if it were guided for a distance of seven inches.

There would be no difficulty by making the barrel for the automatic pistol two inches longer so that it would stick out the front of the slide. This would make an awkward looking weapon, and would not add to the sight radius, as the sight would still be carried on the slide. To carry the slide out also would require a great deal of careful engineering work, as the mechanism is properly balanced at present for the forces which are exerted when the cartridge is fired.

If a longer weapon of this nature were made and placed on the market in competition to the present gun, nearly everyone would buy the present type, as they would prefer the shorter and more convenient weapon, and also because the balance of the short one would be better.

Therefore to put out any such model would only be a money losing proposition for the manufacturers.

In 1917, an automatic pistol called the Grant Hammond, was submitted to the Ordnance Department for test. This had a barrel which I remember was about seven and one-half inches in length. This weapon gave higher velocity, and also somewhat greater accuracy than the Service pistol, but the reason for the greater accuracy may have been the fact that the barrels were hand-made by Harry Pope.

The .38 Military Model Colt automatic has a six-inch barrel, and while the ballistics of this gun are excellent, it does not balance as well as the Government model.

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These Bullets and New Cases at Strikingly Low Prices

It must be distinctly understood that the supply is limited—in no way enough to make a scratch on the regular market. Some sizes listed a month ago are exhausted already, but of those named below we have liberal quantities.

The bullets and cases are standard Winchester, Remington, U. S. Cartridge Co., Dominion and F. A. makes, new, clean and entirely desirable. Bullets of lead are factory swaged, not cast, and are of factory standard types. All bullets are better than average in uniformity of diameter and weight, except one lot named below. Cases are thicker, of better brass and stronger than many obtainable now. In short, these are high grade ammunition components representing the best American standards worthily, despite our low sales figures.

The opportunity is what many a shooter has long desired—enough ammunition to shoot to his heart's content without spending a fortune. At these figures it pays to buy next year's supply now.

A FEW EXTRAORDINARY NEW BARGAINS FOR QUICK BUYING

.45-70 Bullets. One lot, 5,000 only, of 500-grain lead bullets. These are the old U. S. Army standard. The Winchester make is about .457-inch in diameter; Remington about .458- or .459-inch. Both appear to be of about one part tin to sixteen parts lead alloy. The form is standard three-grooved, with slightly cupped base—very clean-cut and attractive. Lubricant is cracking and peeling a little. Packed in boxes of twenty-five.

With this bullet the .45-70 is only slightly less accurate than .30 Springfield rifle. Its thousand-yard score was not beaten until in very recent years. At 200 yards today a skilled shooter is required to demonstrate the difference. And there is no better .45 caliber bullet for killing big game.

Price, less than the tin and lead alloy costs on the market, as these bullets run 14 to the pound. 100 for \$1.25; 1000 for \$11.50.

.35-35 Bullets. One lot, 2,200 only, of 255-grain full jacketed bullets. Some of them have jacketed grooved; others have plain, smooth jacketed. All measure standard .375-inch in diameter and are of Winchester and UMC makes, with flat points. These are the bullets which, with others, built the .35-55 reputation for accuracy and killing power. They are ideal for all practice shooting and for small game killing, in both full power and reduced loads. Price 70 cents a hundred; \$5.00 a thousand.

.25-20 Bullets. One lot, about 3,000 only, of 86-grain lead alloy bullets. These are standard Winchester and Remington factory-swaged. Part of them were intended for short range loading in .25-35. They are lubricated and lubricant is in good condition in the grooves.

These bullets are highly desirable for short range target and small game killing in any .25-caliber rifle. Price, while they last, 500 for \$2.50, 1,000 for \$4.50.

EIGHT ADDITIONS TO PREVIOUS LIST IN JULY ISSUE

.45-70 New Empty Cases. Primed. These are Remington make chiefly, and are smooth without cannellure to stop bullet. They are heavy, solid-head, strong cases, with mouths ready-reamed to take bullets. In boxes of fifty. Price, \$2.10 a hundred.

Mushroom Bullets. A rare find for hunters—don't miss them. Hollow Point bullets, with the entire front, ahead of bands, of soft lead fully exposed, and the rear or bearing section jacketed, with grooves in the jacket. These grooves contain lubricant. A patented bullet, popular just before the .30-40 and .20-30 rifles came out.

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.35 Winchester, Model 1895. New empty cases, primed. Remington make, sure-fire, bright and clean, with mouths bevel reamed to take bullets easily. These new cases hold jacketed bullets firmly without crimping. In boxes of fifty. Price, \$2.50 a hundred.

.35 Winchester, Model 1895, Bullets. Winchester soft point jacketed bullets, standard in every way, just as you see them in factory cartidges. With them and Government pyro or du Pont No. 20 powder, or Hercules H.V., you can load your own full power hunting ammunition. Or with bulk shotgun powder or No. 80 or Unique you can load very useful reduced ammunition. In boxes of twenty-five, weight 250 grains each, diameter .357-inch. Price \$1.25 a hundred.

.30 or .32 Caliber Bullets. Weight 100 grains, full jacketed. Originally intended for .32-20, these bright, clean, attractive little bullets work wonderfully in .30 caliber rifles for light charges. The diameter is only .310. They can be used in front of lighter charges than service bullets. In boxes of one hundred. Price, 75 cents a hundred.

.25-36 Cases. Primed. Remington shells, in boxes of twenty-five, in first class, new condition. Primers are sure-fire. The .25-36 caliber components are hard to obtain. Shooters owning this size should lay in a good supply. Price, \$1.45 a hundred.

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It is easy to buy. Just write for what you want, to be sent by mail or express. Primed cases must go by express, but we remove primers and send by mail when desired. Delivery is made promptly.

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.30-40 Caliber. new empty cases, primed and unprimed. High grade F. A. cases, heavy, clean, bright. Good Krag cases such as these are hard to find now. Price \$1.30 a hundred.

.30-40 Bullets. These are high grade target bullets, 220-grain, full jacketed. They measure .30825-inch, varying only a quarter-thousandth or so either way, and weigh 220 grains very uniformly. Capable of fine shooting. Price 80 cents a hundred.

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.32 Winchester Special Bullets. Winchester and Remington make, soft point and full jacketed, boxes of twenty-five. Just like you get in factory ammunition. Price \$1.00 a hundred. Also special factory-swaged lead bullets, 75 cents a hundred.

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.32-40 Caliber. Bullets only. Soft point and full jacketed bullets of Winchester and Remington makes, 165 grains weight. Diameters .319-inch and .3205-inch. Very accurate. Price \$1.00 a hundred.

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1. An edged, flat face cuts full-sized wads from the target—giving every fraction of an inch shot value.
2. Front bands are bore or land diameter. They center the bullet precisely in barrel without shaving, while developing no resistance.
3. A cannellure for crimping the case mouth holds bullets under sharp recoil. It maintains uniform seating. Located far forward, it places bullets deep in cases, reducing air space over powder. It makes ignition regular, prevents misfires, and leads to nicer accuracy. Compare with older bullets.
4. A front bearing section, carried far forward, engages rifling with the least possible free jump.
5. A sharp, well-relieved dirt-scraper band clears fouling from each preceding shot—a necessity for continued accuracy.
6. Main bands are amply wide to hold rifling without stripping; amply large to fill bottoms of grooves.
7. Lubricant grooves are scientifically calculated as to area, location and depth. Too little grease causes leading; too much unbalances bullets.
8. Broad base bands prevent gas-cutting at its source.

Practical six-gun men readily will see in these bullets the exacting ballistic requirements of the short range loads mentioned.

B. & M. MOLDS. New design, speedy, convenient. Iron or pure nickel.

B. & M. FACTORY-CAST BULLETS. Alloyed right. Die-sized and lubricated, or not, as desired. Write for the details.

EVERY REVOLVER SHOOTER IN THE COUNTRY SHOULD GET HIS NAME ON OUR LIST. The full B. & M. line for hand loaders and other shooters is new and desirable.

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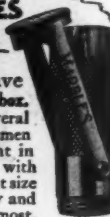
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MARBLE ARMS & MFG. CO.
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Experienced Riflemen choose FECKER SCOPES

because they are result getters. At the Sea Girt tournament more Fecker Scopes were used than all other makes combined. Fecker Scopes helped win more matches than all makes of scopes combined.

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COLLECTORS wishing to fill gaps in their exhibits and riflemen desiring to dispose of obsolete weapons will find this an excellent medium for purchases, sales and exchanges.

Free Insertions. Each subscriber is entitled to one insertion of one-half inch, when his subscription is paid up for one year. It is necessary only to write or print the text plainly, noting thereon the date subscription was paid. These advertisements will appear in the first available issue and should be in publication office two weeks prior to the following publication date.

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Business cards and display in this column accepted at the rate of \$2.50 an inch. No space less than an inch sold for display.

"FIREARMS OF YESTERDAY" are a specialty with "The OLD GEORGETOWN GUILD." At all times there are on hand a large number of specimens from which to select examples of early American, Confederate States' and European firearms. Tell us what your collection needs. We will probably be able to help you. The Old Georgetown Guild, 2722 M. Street, N. W., Washington, D. C.

N

FOR SALE—2,000 antique firearms at reasonable prices. Send six cents in stamps for 24-page price list. Let me know your special wants along any line of antique firearms. I am always anxious to buy single specimens or entire collections. Joe Kindig, Jr., 336 West Philadelphia Street, York, Pennsylvania.

O

ANTIQUE AND MODERN FIREARMS (new and used) sold, exchanged, and bought. Large stock—reasonable prices! Stephen Van Rensselaer, Peterborough, N. H.

P

FOR SALE OR TRADE—One of the nicest cleanest collections of 65 Antique percussion revolvers, flintlocks, pepperboxes and other miscellaneous arms, some of them the oldest arms in existence, every arm has a history. Will sell complete or singly, or as many as customer wants, or will exchange for modern arms. What have you? John Kammerer, 331½ Main Ave., Spokane, Washington.

S

Terms

THE uniformly excellent returns from advertisements appearing in the classified columns of THE AMERICAN RIFLEMAN make it a most satisfactory and productive medium for the disposal of surplus shooting equipment, or the acquisition of special types of firearms.

Free Insertions. Each subscriber is entitled to one insertion of one-half inch, when his subscription is paid up for one year. It is necessary only to write or print the text plainly, noting thereon the date subscription was paid. These advertisements will appear in the first available issue and should be in publication office two weeks prior to the following publication date.

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SHIFT WITH THE HOUSE OR SHIFT THE GUNMAN. N. Woodstock, N. H. Hun guns and near COLTS NEVER were found here. If you want to help fight the fanatics or BUY OR TRADE REAL GUNS with absolute protection on 10% where are KEPT on hand for your convenience in every TYPE with the cheapest RIGHT and the rest NEW. SHIP YOUR STAMP INSIDE. Can YOU imagine Coolidge or Dawes giving a fanatic \$7,000 of OUR MONEY because he was winged by an "enforcement ??? officer" ??? Frankly, we cannot.

TC

FOR SALE—Marlin 39, \$26. Marlin 38, \$20. Mossberg 8, \$15. 30-30 or 303 Savage 99, \$32. Colt 44-cal. rifle, \$8. Swiss 41-cal. rifle, \$6. Colt S. A. 45, 7¼-inch, \$30. Model 23 Savage, 22 Sporter, \$18.00. Model 23 Savage, 25-20 Sporter, \$21.75. Model 23 Savage, 32-20 Sporter, \$21.75. B. S. A. Model 12, \$45. "Perfection" reloading tool, complete, \$15. f. o. b. "Albertson," Lewes, Delaware.

54

WANTED—Old style Winchester 12-gauge, lever action, repeating shotgun, serviceable condition, full choke. Also .22 Flobert rifle, smooth bore for B B caps only. L. W. Peardley, Box 800, Bridgeport, Conn.

66

Rim Fire new empty cases, primed, and bullets for them .22-calibers, and .25 Stevens. Winchester and Remington makes, including .22 Auto. \$2 a thousand bullets plus cases. J. R. Mattern, Julian, Pa.

FOR SALE—One .45-cal. Colt auto. pistol, new, commercial manufacture, \$25. One S. & W. .22-cal single shot, 10 inch target pistol, Olympic type barrel and Patridge sights, practically new, perfect condition, \$20. One Ballard .22-cal rifle, single trigger with Peterson barrel, super accurate, weighs little over ten pounds, equipped with Winchester scope bases, vernier rear and Winchester aperture front sights, \$35. One Springfield .22-cal. rifle, new, perfect condition, \$35. 400 rounds Colt .45 pistol ammunition, \$10.00. 1,000 .30-cal. bullets, 170-grain, gliding metal. F.A. arsenal, f.b., original package, \$7. One pair Carl Zeiss 3-power opera glasses, original cost \$55, slightly used but in first-class condition, \$35. Harry D. Dodge, 1309 Gotham Nat. Bk. Bldg., New York City.

56

FOR SALE—One Springfield '06 Sporter, walnut pistol grip stock, checkered, Lyman 48 rear and King in military rear base. King gold bead front—Perfect, \$45. One Duxbak duckshooter's coat, size 42, never used, \$13.50. One Duxbak duckshooter's pants, size 35 waist, 31 inches long, never used, \$7.50. Charles Hoffmeister, Imperial, Nebraska.

53

TRADE—Marble's Game Getter, 18-inch. with holster, factory condition except bluing worn where hand grasps gun, for any of following: Colt .22 P. P. Target; Colt Army Spl., 32-30 or 38; Colt New Service, any caliber; S. & W. 22/32; 32-20 or 28 M. & P. square butt; 44 Spl., or 45 Mod. 1917. Mutual examination privileges. Francis Triem, San Rafael, Cal.

55

FOR SALE—Neldner-Ballard, .22-cal. 1 r., 30-inch, No. 3 nickel steel 6-groove barrel, engraved pistol grip action, Schuetzen stock. Double set triggers, Pope adj. palm rest, with 12½ lbs., new—Price \$35. Neldner-Ballard, 22-1 r., 27-inch, No. 2 nickel steel 6-groove bbl., engraved pistol grip action, checkered pistol grip shotgun stock, double set triggers, weight 9½ pounds. Price \$75. Winchester s. a. 39-40-cal. No. 3 Winchester bbl., 27 inches long. Mann-Neldner firing pin. Mann-Neldner scope bases. Whelen sling, 200 F. A. shells, new condition, \$50. 1,000 .30-cal. 140-grain gallery practice bullets. Government Model 1923. Price \$5. Ottway spotting scope, 20-power, quite new, \$7. J. J. Turner, 2419 16th Ave. So., Minneapolis, Minn.

69

FOR SALE—Ithaca 4E single trap 14 x 1½ x 1½ x 34 inches, new condition, \$60. c. o. d., subject to examination. WANT—Barrel for '97 take down Winchester, 12-gauge, any condition, bore or length. Homer A. Booth, Pittsfield, Massachusetts.

64

FOR SALE—Over and under shotguns in 12-, 15-, 20-, 28-gauges in stock and made to order for trap or field work. Each gun guaranteed for one year. Wm. F. Smith, 5619 N. 4th St., Philadelphia, Penna.

UD

FOR SALE—One Sporting Springfield, 24-inch barrel, \$50. One Sporting Springfield, 30-inch barrel, \$60. Both guns in perfect condition. W. R. McCay & Son, 839 Morton St., New Castle, Penna.

VA

FOR SALE—300-meter free rifle, .30-06-cal., Springfield, super-accurate, 24-inch straight No. 4 barrel, weight 16 lbs. German double set triggers, palm rest, good arm hook, Lyman No. 48 rear, aperture front. Winchester scope blocks between. In new and spotless condition. Will ship on trial. Price \$110. Also new Colt Officers Model, .38, 7½-inch barrel in spotless condition. Price \$28. R. K. Clapper, Hyndman, Pennsylvania. 77

FOR SALE—New sporting Springfield, Cir-cassian walnut stock, 13¼ x 1½ x 3 inches. Lyman No. 48 and ivory bead. Hand-finished action and trigger pull. Quick detachable swivels and Whelen sling. Metal work and bluing by Griffin & Howe. Superb fitting and checking. Weight 7½ lbs. Price \$100. R. R. Rice, Prescott, Arizona. 78

New Shotgun Shells, empty, primed, 20-gauge and 410-gauge only. A few hundred high-grade cases, and all kinds of wads for them. Shell crimpers and other loading tools also supplied. Write for prices on number desired. J. R. Mat-tern, Julian, Pa. 79

FOR SALE—A number of Kentucky rifles and accessories from \$5 to \$15. Colt Frontier, 7½-inch barrel, ivory grips and handsomely en-graved, perfect. Carpenter, Box 332, Lancaster, Pennsylvania. 59

WANTED—"American Rifleman" for May 15, June 15, Aug. 1, Aug. 15, Sept. 1, Nov. 15, and Dec. 1 of 1923. Oscar M. F. Nelson, Crockett, California. 70

TRADE—30-30 Winchester carbine in A-1 condition for a s. a. .45 Colt 7½-inch barrel in same condition. Joe Beneshak, Mahonen, Min-nesota. 79

TRADE—22-cal. Maxim silencer for Win-chester s. a. action, condition of barrel no object, or reloading tools. What have you? T. R. Graham, Box 764, Bellefonte, Penna. 73

TRADE—Radio receiver for A-1 Springfield Sporter, A-1 Krag Sporter, belt and knife, Gov't. cartridges for new B. & L. binoculars with case. T. Stahl, Box 217, Birmingham, Michigan. 67

WANTED—A 20-gauge shotgun and a .30-cal. rifle. Must be in good condition. Describe fully. Quote best price. R. H. Morris, P. O. Box 756, Houston, Texas. 58

FOR SALE—Star gauged Springfield, \$30.00. With No. 48 rear, \$40. Sporting stock, \$5.00. .45-cal. Government auto., \$20. Dan Lake, Lake Mercantile Co., Lake City, Kansas. 57

WANT—1895 Winchester .20-40 rifle or car-bine, barrel A-1 condition inside and a bargain. J. H. Avinger, Avinger, Texas. 62

FOR SALE—S. & W. 10-inch, perfect target pistol, like new inside and out, \$20. A. E. Smith, 244 Redwood Ave., Sacramento, Cal. 61

FOR SALE—Allen & Thurber Pistol-perc-half octagon, top hammer, \$2.50; LePage revol-ver, six-shot, ring trigger, saw handle, \$2.50; Slocum revolver, reeded-indent ed cyl., bronze frame, sliding cyl. chambers, mahog. grip, five shot, \$2.50; Colt Lightning rifle, cal. .44 Oct. barrel, \$8; heavy percussion Match rifle, length 47½ inches, octagon barrel, maple stock, sterling silver and brass trim and mounting, spur guard, double set triggers, about .50 cal., \$10. Albert-son, Lewes, Delaware. 65

FOR SALE—230-cal. Ross Model 10, like new inside and out, beautiful curled walnut stock, fine new sole leather case and box car-tridges goes with the outfit. This Ross has Hoosiers safety attachment, \$75. 35 Rem. automatic like new, fired less than fifty times. Price \$50. 33 cal. Winchester like new inside and out has beautiful fancy walnut fine pistol grip stock checkered, matted barrel full length. Domlois sights. Price \$80. Dr. P. A. Matteson, Bennington, Vermont. 71

WANTED—Ideal or Bond reloading tool for caliber .45 Colt New Service. **FOR SALE**—22 take down Savage high power. Excellent condition. Also new carrying case and 40 rounds Winchester ammunition. Value \$53, want \$31 for all. Dr. Charles Brodsky, 117-01 Metropolis Ave., Richmond Hills, N. Y. 72

FOR SALE—One Mauser (Waffenfabrick), 7.63 mm.-cal., 10-shot with approximately 1,000 rounds ammunition. One S. & W. .45-cal. d. a. 4½-inch bbl. One Colt .45 auto, pre-war. All in perfect condition. Two star gauged Spring-fields, 30-U. S., good condition. John E. Robin-son, Box 34, Columbus, Ga. 63

TRADE OR SELL—New 30-power K. & E. Co. spy glass or spotting scope leather covered. **WANT**—Field glasses 8- or 10-power, 12-gauge repeating shotgun or .22 automatic pistol. Must be in good condition. H. E. Webb, 1906 Foster Ave., Chicago, Ill. 74

FOR SALE—Single action Colt 4½-inch .44 Special with extra .44-40 cyl. fitted at factory better than new condition, cost new few weeks ago \$38.50 sell for \$28 post-paid cash, no trades. W. S. Davenport, 2730 Stuart St., Berkeley, California. 75

45-70-500 Loaded Cartridges. I have a case of black powder ammunition to sell for a low price. Cases heavy and strong, bullets bright, everything clean and new-looking. Write for details. J. R. Mattern, Julian, Pa. 76

WANTED—The following with ruined barrels: .22 caliber Colt's Auto., Savage Sporter, 52 Win-chester, .414 Stevens and Winchester musket. C. L. Mericle, R. F. D. No. 1, Vaughnsville, Ohio. 68

WANTED—One Lyman 103 sight for Win-chester s. a. .22 musket; parts for Bond reload-ing tool for .44 Russian Colt cartridges; Win-chester s. a. action cal. 30-40. C. P. Beals, North Kansas City, Mo. 69

FOR SALE—Brand new Colt Officers' Model, .38 Special 6-inch barrel, gold bead front sight, with extra fine hand made calfskin cartridge belt and holster, and 100 cartridges, \$38. Brand new Savage .250-3000 rifle, take-down, Lyman windgauge tang, gold bead front, folding leaf barrel sights. Interchangeable .410 gauge barrel for shot cartridge, \$50. Bargains. No trades. Dr. H. C. Murray, Murray Block, Herkimer, N. Y. 49

FOR SALE—Perfection reloading tool. Decape, recaps, resizes shell neck, seats the bullet. Straight line type. Dies interchangeable. Com-plete for one caliber \$15. F. O. B. Extra parts for any caliber. Shell holder \$1.50. Bullet guide \$1. Cap guide \$.50, decapping pin \$.25. Shell neck resizer comp. \$2.50. Bullet Seating stem \$.50. Recapping plate with stem \$.50. Circular on request. "Albertson" of Lewes, Del. 48

FOR SALE—30-303 Model '99 Savage. 20-inch barrel. Stock lengthened one-half inch. Oil finish. Lyman rear, gold bead front. A-1 inside and out guaranteed. 95 H. V. ctgs. Ideal comb. tool and mold \$40. Colt Police Positive target .22 W. R. F. Fine, no pits, \$15. New Ideal tool, double adj. for .45 Colt automatic, \$3. H. J. Manchester, 2042 E. 77th St., Cleveland, Ohio. 50

FOR SALE—One .280 Ross new sporting rifle, Lyman 48 sight. \$40 Winchester 150-grain um-brella point cartridges, \$70. One Model 1896 .40-65 Winchester New, with 115 cartridges, \$10. One Model 1895 Box Magazine Winchester .38-72, with Lyman receiver windage sight, 115 ctgs. new, \$15. Carroll R. Thogn, Sheridan, Wyo. 56

40-70-330 Winchester 1886 Cartridge Cases and Bullets. New cases, with smokeless primer and bullet cannelure. Bullets grooved lead, lu-bricated. For sale at a low figure. Write J. R. Mattern, Julian, Pa. 76

FOR SALE—New .22 auto. Colt \$20. Latest Reising \$20. Springfield-Neidner .22 S. S. super accurate \$30. Trade 4 x 5 Cycle Graphic for Q 3¼ x 4¼ Telescopic Graflex. W. J. Becker, Olympia, Washington. 60

SELL OR TRADE—Sporting Krag, 30 inches, fine order, with Ideal No. 3 Tool, cartridges, bul-lets, empties, \$15. **WANT**—Stevens .414, 22 L.R. J. S. Langwill, Tomah, Wisconsin. 53

WANTED—AMERICAN RIFLEMAN for May 15, June 15, August 1, August 15, September 1, November 15 and December 1, of 1923. Oscar M. F. Nelson, Crockett, California. 28

FOR SALE—Ideal No. 4 Loading Tool for .44 S. & W. Russian cartridge in first class condition, \$2.50. T. H. THE AMERICAN RIFLEMAN. 26

FOR SALE—45 Automatic Pistol with holster, in good condition, \$25. F. E. Michenard, 707 Plaza Apts., Washington, D. C. 41

WANTED—Hammer for Colt revolving shot-gun Model 1857. S. S. Sherwood, Bethel, Conn. 76

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Subscription \$2.00 per year to individual members of the NRA; or its affiliated clubs;

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Two World's Records for US .22 N.R.A. At Eastern Small-Bore Matches

The cartridge which was used by the winners of all the Olympic Small-Bore Championships has added two more world's records to its credit. Both records were made during the Third Annual Eastern Small-Bore Championship Matches held recently at the Sea Girt (N. J.) Rifle Range.

Mr. J. M. Hilborn, of the Roosevelt Rifle Club, New York, N. Y., established one of the new marks during the Eastern Small-Bore Team Match when he scored 249 x 250 as follows:

50 yards	-	-	100-7V's
100 yards	-	-	99-3V's
200 yards	-	-	50-6V's

The other world's record was shot by Capt. G. L. Wotkyns, U. S. A., of the National Capitol Rifle Club, who made 35V's in shooting a perfect score of 225 x 225 during the Palma Small-Bore Team Match.

Shooters using the US .22 N.R.A. also registered the following impressive string of wins at the Eastern Small-Bore Matches:

Small-Bore Spencer Match

Won by J. M. Hilborn, Roosevelt
Rifle Club - 99 x 100.

Eastern Small-Bore Team Match

Won by National Capitol Rifle Club.
Half of team used the US .22 N.R.A.

Long-Range Individual Match

Won by L. C. Roujon, Arlington
(N. J.) Rifle Club - 99 x 100.

50-Yard Re-Entry Match

Won by Capt H. H. Leizear, National
Capitol Rifle Club, 300x300 (23V's)

100-Yard Re-Entry Match

Won by Capt. H. H. Leizear, National
Capitol Rifle Club, 300x300 (11V's)

200-Yard Re-Entry Match

J. W. Gillies, Roosevelt Rifle Club
tied first place. Won aggregate with
best 10 targets.



.22 N.R.A.

Long Rifle Cartridges



Wearing Out the Rifle Barrel

ALLOY bullets have gained much of their popularity because of the idea that they will not wear out the barrel as rapidly as metal cased bullets. When the force of the powder gases pushing behind the bullet is taken into consideration, when the fact that modern rifle barrels are made of the toughest steel, is considered, and when the relative softness of the "gilding metal" and cupro-nickel jackets of the regular commercial bullets is borne in mind, the "alloy bullet, longer barrel life" theory loses most of its strength.

The thing that wears out rifle barrels is powder gas, more than bullet friction. The reason the rifle fired only with alloy bullets outlasts the one that is fired with metal-cased bullets is because the alloy bullets are of necessity fired with reduced charges of powder. Metal cased bullets fired with the same reduced loads of powder would not show rapid barrel wear.

A very important development has been made by American ammunition

manufacturers, in the perfection of the "gilding metal" (alloy of copper and zinc, with or without addition of tin) jacketed bullet, reducing metal fouling as compared with the older "cupro-nickel" jacketed bullet. We had developed a powder containing "decoppering" metal, intended to reduce the accumulation of metal fouling resulting from the use of cupro-nickel jacketed bullets. This development is now of less importance to users of sporting ammunition because of the reduction in metal fouling resulting from the use of "gilding metal" jacketed bullets.

The useful life of the rifle barrel depends primarily on the kind and quantity of powder used, not on the composition of the bullet. It is a generally known fact that nitrocellulose powders give the minimum of "gas cutting" or erosion and consequently give the longest barrel life. All du Pont Smokeless Rifle Powders are of nitrocellulose composition.

E. I. DU PONT DE NEMOURS & CO.

INCORPORATED

Military Sales Division

Wilmington, Delaware

The characteristics and adaptability of powders are subjects for constant study and experimentation by manufacturers of ammunition who are scientifically and mechanically equipped to produce cartridges of the greatest uniformity and dependability. We recommend factory loaded ammunition.

